GENERAL REPORT.

ON THE

ADMINISTRATION

OF THE

BOMBAY PRESIDENCY

FOR THE YEAR 1865-66.

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JUDICIAL.

LEGISLATIVE.

The following Acts, applicable to the Judicial Administration of the Bombay Presidency, were passed during the year 1865-66 by the Governor General of India in Council :—

No. XXIV. of 1865.—An Act to give effect to certain warrants of Attorney and cognovits.

No. XXVIII. of 1865.—An Act to provide for the more speedy liquidation of Insolvent Traders' Estates in Bombay.

No. XXIX. of 1865.—An Act to amend the Pleaders, Mookhtars, and Revenue Agents' Act, 1865.

No. V. of 1866.—An Act to provide a summary procedure on Bills of Exchange, and to amend in certain respects the commercial Law of British India.

No. VI. of 1866.—An Act to continue Act No. XXXI. of 1860 (relating to the manufacture, importation, and sale of arms and ammunition, and for regulating the right to keep and use the same, and to give power of disarming in certain cases), and for other purposes.

No. VIII. of 1866.—An Act further to amend the Schedule annexed to the Code of Criminal Procedure.

No. X. of 1866.—An Act for the incorporation, regulation, and winding-up of Trading Companies and other Associations.

No. XV. of 1866.—An Act to amend the Law of Partnership in India.

No. XX. of 1866.—An Act to provide for the Registration of Assurances.

No. XXI. of 1866.—An Act to legalise, under certain circumstances, the dissolution of marriages of Native Converts to Christianity.

No. XXIII. of 1866.—An Act to correct two clerical errors in the Letters Patent for the High Court of Judicature for the Presidency of Bombay.

The following Acts were passed by the Council of His Excellency the Governor of Bombay for making Laws and Regulations during the year 1865-66 :—

No. II. of 1865.—An Act to provide for the management of the Municipal affairs of the City of Bombay, and to make better provision for the conservancy and improvement of the City, and for the levying of rates and taxes therein.

No. III. of 1865.—An Act to amend Act XXI. of 1848 (for avoiding Wagers).

No. IV. of 1865.—An Act for the regulation of Mofussil Gaols, and the enforcement of Discipline therein.

No. V. of 1865.—An Act to authorise the punishment of whipping in certain cases in the Bombay House of Correction.

No. VI. of 1865.—An Act to authorise the destruction of useless records in certain Courts of the Bombay Presidency.

No. VII. of 1865.—An Act to extend the provisions of Act XX. of 1863 of the Governor General of India in Council to the District of Canara in the Bombay Presidency.

No. VIII. of 1865.—An Act to authorise taxation in the Province of Sind for objects of public local utility and improvement.

No. I. of 1866.—An Act to extend the provisions of (Bombay) Act I. of 1865 to the Province of Sind.

No. II. of 1866.—An Act to divest Courts of Revenue of jurisdiction in certain cases, and to vest such jurisdiction in the Courts of Civil Justice in the Bombay Presidency.

No. III. of 1866.—An Act for the prevention of gambling in certain places in the Presidency of Bombay.

No. IV. of 1866.—An Act for enlarging the jurisdiction of the Court of Petty Sessions at Bombay, and as regards the trial of certain offences modifying its constitution.

No. V. of 1866.—An Act to repeal Section X. of Regulation XVI. of 1827.

In addition to the above Laws the following Bills were also passed during the year 1865-66 :—

Bill to declare the constitution of Courts of Civil and Criminal Judicature in the Province of Sind.

Bill to regulate and restrict the sale of Poisons in the Bombay Presidency.

Bill to consolidate and amend the Laws relating to the levy of Port Dues in certain Ports of the Bombay Presidency.

Bill to limit the liability of a son or heir of a deceased Hindoo for the debts of his ancestor, and the liability of the second husband of a Hindoo widow for the debts of her deceased husband, and otherwise to amend the Law of Debtor and Creditor.

Bill to shorten the language used in Acts of the Governor of Bombay in Council, and to make certain provisions regarding thereto.

Bill to amend the Law relating to certain declarations of office in the Bombay Presidency.

Bill to authorise the extension of certain Regulations and Acts to Territories in the Bombay Presidency not subject to the general Regulations.

CIVIL JUSTICE.

The following statement shows the Civil work disposed of at the Appellate Side of Her Majesty's High Court of Judicature during the year 1865-66 :—

Regular Appeals.					Special Appeals.					Applications for admission of Special Appeals.						Miscellaneous applications.	
Balance on 1st May 1865.	Received from 1st May 1865 to 30th April 1866.	Total.	Disposed of.	Balance on 30th April 1866.	Balance on 1st May 1865.	Received from 1st May 1865 to 30th April 1866.	Total.	Disposed of.	Balance on 30th April 1866.	Balance on 1st May 1865.	Received from 1st May 1865 to 30th April 1866.	Total.	Disposed of.		Balance on 30th April 1866.	Granted.	Rejected.
													Admitted.	Rejected.			
13	17	30	18	12	350	749	1,099	777	322	15	1,001	1,016	749	250	17	1,449	191

2. The following return showing the Civil business disposed of at the Original Side of Her Majesty's High Court of Judicature during the year under report has been submitted by the Prothonotary of that Court :—

Number of Original Suits instituted under Act VIII. of 1859.	Number of Appeals from Division Courts instituted.	Number of Original Suits disposed of.				Number of Appeals from Division Courts disposed of.	Motions.			Applications for Probates and Administration.			Causes.			REMARKS.
		Causes.		Motions.	Orders in Chambers.		Ecclesiastical.	Equity.	Insolvency.	Ecclesiastical.	Equity.	Insolvency.	Ecclesiastical.	Equity.	Insolvency.	
		Decided.	Dismissed													
Ordinary Original Civil Jurisdiction. 1,731																
Admiralty .. 1																
1,732	42	750	829	869	1,208	26	19	31	171	214	3	370	11	6	320	..
Special case from the Small Cause Court..... 2																

Regulation Districts.

3. The returns for the Regulation Districts under the Presidency of Bombay show that there were employed in those districts during the year under report 10 Judges, 10 Assistant Judges, 10 Principal Sudur Ameens, 8 Sudur Ameens, 83 Moonsiffs, and 606 Pleaders. During the year 1864-65 there were 673 practising Pleaders in the Regulation Districts, so that there has been a decrease in the number of Pleaders for the present year. Of the 606 Pleaders there was only one who was not a native of India, and 39 of them were acquainted with English. Forty-five of these Pleaders had certificates of legal education.

4. At the beginning of the year 1865-66 the number of suits on the files of the Courts throughout the Regulation Districts was 53,225, which added to the number of suits filed during the year, which was 129,216, makes the total number of suits for decision amount to 182,441. As, however, only 141,912 decisions were passed during the year, there were 40,529 suits on the files at the end of the year.

5. Out of the 141,912 decided suits there were 5,700 for possession of land, 5,429 otherwise connected with land, and the rest connected with debts, wages, &c. Of the suits decided there were 119,406 which would have been cognisable by Courts of Small Causes.

SIND.

6. The statements submitted by the Commissioner in Sind are for the calendar year 1865 and not for the official year 1865-66.

7. These statements show that in all the Civil Courts in the province of Sind the number of suits filed and in arrears in the year 1865 was 11,028, and the number decided was 10,024. The corresponding number for the year 1864 was 13,665 and 11,821. Of the suits decided there were 6,783 for plaintiffs and 1,341 for defendants. The value of the suits in 1865 was Rs. 5,59,770 and in 1864 Rs. 11,66,637.

8. The number of appeals filed and in arrears in the Appellate Courts in Sind in the year 1865 was 408, and the number decided 314. The corresponding number for the year 1864 was 455 and 289. The value of the appeals in 1865 was Rs. 29,151 and in 1864 Rs. 23,902.

ADEN.

9. The following table shows the amount of Civil work transacted in Aden during the year 1865-66:—

1865-66.	
Number of Suits.	Aggregate of Awards.
2,474	55,372

COURT OF SMALL CAUSES.

BOMBAY.

10. The following tabular statement shows the working of the Bombay Court of Small Causes during the year 1865-66:—

Year.	Number of Suits instituted.	Amount litigated.	Fees carried to the credit of Government.	Number of Judgments given.	Amount received in Cases decreed and compromised.	Amount paid to Suitors in Cases decreed and compromised.
		Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.
1864-65 ..	18,495	19,74,326 2 5	1,98,558 6 5	11,613	3,76,133 6 9	3,76,285 10 11
1865-66 ..	22,362	25,64,026 0 3	2,56,479 9 6	14,483	4,93,557 4 8	4,83,207 14 7
Increase in 1865-66 ..	3,877	5,89,699 13 10	57,921 3 1	2,870	1,17,423 13 11	1,06,922 3 8

11. This statement shows that there has been a considerable increase in the business and receipts of the Court during the year 1865-66 as compared with those of the preceding year 1864-65.

12. The entire expenses of the Court amounted to Rs. 1,45,317-1-2, which deducted from the net receipts or Rs. 2,56,479-9-6 leaves a surplus to the credit of the Court of Rs. 1,11,162-8-4.

13. There were 1,154 suits for sums over Rs. 500 instituted during the year under the extended jurisdiction of the Court, being an increase of 314 over the number instituted during the preceding year.

14. During the year under report 25 applications were made for the summary enforcement of obligations specially registered under Act XVI. of 1864.

Mofussil.

15. The following statement shows the business and receipts of the Courts of Small Causes in the Mofussil :—

STATEMENT showing the Business and Receipts of the Court of Small Causes in the Mofussil.

District.	Number of Suits undecided from previous year.	Number instituted in current year.	Total.	Number disposed of.	Balance remaining over till next year.	Mode of disposal.				Suits classified as to their Value.						
						Decided on merits.	Decided exparte.	Admitted.	Compromised, withdrawn, dismissed, &c.	Under Rs. 25	From Rs. 25 to Rs. 50.	From Rs. 50 to Rs. 100.	From Rs. 100 to Rs. 200.	From Rs. 200 to Rs. 300.	From Rs. 300 to Rs. 400.	From Rs. 400 to Rs. 500.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Poona	354	6,133	6,487	5,715	772	682	3,690	260	1,083	2,002	1,719	1,054	578	255	36	71
Ahmednuggur .	50	2,425	2,475	2,442	33	397	1,321	461	263	937	790	462	183	56	4	10
Belgaum	59	1,426	1,485	1,406	79	211	828	191	176	354	417	352	192	51	19	21
Ahmedabad ..	662	1,794	2,456	1,951	505	234	841	57	819	445	793	387	217	78	13	18

District.	Costs.	Average of Costs per Suit.	Applications for executing Decrees.				Receipts of the Court.
			Written.	Verbal.	Applications disposed of.	Cost of.	
	18	19	20	21	22	23	24
	Rs. a. p.	Rs. a. p.				Rs. a. p.	Rs. a. p.
Poona	48,964 12 1	8 8 9	6,113	4	6,091	5,653 1 0	41,671 7 0
Ahmednuggur	17,744 4 2	7 4 3	2,230	....	....*	2,051 4 0	14,963 10 0
Belgaum	13,990 3 5	9 15 2	787	12	728	813 0 0	10,134 3 2
Ahmedabad	12,386 15 3	6 5 7	1,052	....	....*	1,236 10 0	12,190 8 0

* These numbers have not been given in the statements received for the Ahmednuggur and Ahmedabad Small Cause Courts.

District.	Charges for maintaining the Court.	Excess of Charges over Receipts.	Excess of Receipts over Charges.	Average duration of Suits.		Amount in litigation in Suits disposed of.	Average value per Suit.
				Months.	Days.		
	25	26	27	28		29	30
	Rs. a. p.	Rs. a. p.	Rs. a. p.			Rs. a. p.	Rs. a. p.
Poona	20,174 15 5	....	21,496 7 7	....	29	3,61,647 10 5	63 4 5
Ahmednuggur	9,219 10 2	....	5,743 15 10	....	12	1,24,448 8 6	50 15 4
Belgaum	12,627 12 10	2,493 9 8	....	....	19	93,963 7 3	66 13 1
Ahmedabad	6,387 0 9	....	5,803 7 3	3	6	1,17,634 5 10	60 4 9

From the foregoing statement it will be seen that only in the case of the Belgaum Court of Small Causes the disbursements have exceeded the receipts.

CRIMINAL JUSTICE.

High Court.

17. There were disposed of at the Original Side of Her Majesty's High Court eight motions in criminal matters and 175 criminal cases during the year. The corresponding number for the previous year was 4 and 147.

18. The following statement shows the criminal business disposed of at the Appellate Side of the High Court during the year 1865-66 as contrasted with that of the previous year :—

	Cases received for confirmation of capital sentences.	Cases disposed of on appeals after calling for Records and Proceedings.	Cases disposed of on review of Criminal Returns.	Cases received for orders of Court.	Petitions presented in Court and received with Register of Petitions.	Miscellaneous.	Total.
1864-65 ..	55	132	223	65	250	337	1,062
1865-66 ..	51	128	184	70	205	404	1,042

Regulation Districts.

19. From the returns submitted to Government for the Regulation Districts it appears that there were disposed of during the year under report 1,098 cases, and 1,998 persons tried by the Courts of Session. The corresponding number in the preceding year was 1,092 and 1,997. There were 1,005 convictions in 1865-66, while in the year 1864-65 there were 997. The number of witnesses summoned was 9,605.

20. The total number of offences tried in all the Criminal Courts in the Regulation Districts of this Presidency was 27,971, the number of trials being 27,233. The corre-

sponding number in the previous year was 30,075 and 27,243. The number of persons tried was 51,309, and of these 29,051 were convicted.

21. The largest number of trials was under the heads of "hurt," "criminal force," and "assaults." The convictions under these heads were 7,176. The corresponding number for the previous year was 7,749, so that there was a decrease of 573 under these heads. There were 5,483 convictions for thefts other than thefts of cattle, and 471 convictions for thefts of cattle. In convictions of the more serious offences there was a decrease under the head of "murder," but an increase under the heads of "grievous hurt" and "dacoity."

22. 1,792 appeals were disposed of in the Mofussil—886 by the Sessions Courts, and 906 by the Magistrates of the Districts. The sentences of lower Courts were reversed in 345 cases; in 157 cases the sentences were altered, and in the rest they were confirmed.

SIND.

23. The total number of criminal cases tried in Sind in 1865 was 1,172, and the number of persons tried was 18,820. The corresponding number during the previous year was 9,514 and 16,679. The number of persons convicted was 9,864, and the rest were acquitted or discharged. There were disposed of in Sind during the year 1865, 40 cases of murder, 13 of culpable homicide, 12 of attempt to murder, 27 of causing grievous hurt, and 2,140 of hurt, criminal force, and assault. There were also 25 cases of false evidence, 2,190 of theft or misappropriation of cattle, 2,677 of petty thefts, 844 of receiving stolen property, 696 of house-breaking, &c., 17 of highway robbery, 6 of forgery, and 23 of adultery.

24. Of the sentences passed by the several Criminal Courts in the province of Sind during the year 1865, 19 were of death, 14 of transportation for life, and 29 of transportation for different periods. 4,480 convicts were sentenced to imprisonment for different periods, and 4,228 were punished with fine only.

ADEN.

25. The following table shows the amount of Criminal work disposed of at Aden :—

	1864-65.		1865-66.	
	Convicted.	Acquitted.	Convicted.	Acquitted.
Offences against the person	133	..	264	3
Do. do. property	235	3	156	..
Do. do. public justice	5	..	13	..
Do. do. weights and measures	1	..	1	..
Do. do. coin and Govt. stamps	1	..	1	..
Miscellaneous	311	1	533	2
	686	4	968	5
Total convicted and acquitted	690		973	

26. The following table shows that there were tried 123 criminal cases more in 1865-66 than in 1864-65 :—

	1864-65.	1865-66.
Offences against human body	93	161
Do. do. property	199	141
Do. do. public justice	4	8
Criminal intimidation, insult, and annoyance	27	71
Contempts of lawful authority of public servants	8	39
Offences relating to coins and Government stamps	1	1
Do. marriage	1	..
Do. public servants	1	....
Do. weights and measures	1	1
Do. public health	2	12
Do. religion	1	1
Defamation	1	7
Offences relating to public tranquillity	....	1
Breach of contract of service	....	1
Miscellaneous	195	213
Total	534	657

27. The Political Resident at Aden reports as follows in regard to the administration of criminal justice at Aden during the year under report :—

"One hundred and twenty-three more criminal cases than last year, however, appear only in the table, but the addition has only been in comparatively trifling matters, such as common assault, affray and insult, brought about by the number of poverty-stricken people who flocked into Aden when scarcity drove them from the interior. The prompt interference of the police prevented the crimes assuming a dangerous nature. There have been no very serious cases, and considering the trying time which has been passed through, it is very creditable to the police that crime has been so well kept down. The alteration in the pay of the police has undoubtedly added greatly to the efficiency of this body. Three constables having been sanctioned, were obtained from the garrison—two from the Royal Artillery and one from Her Majesty's 109th. They are good, steady men, and have proved most useful in respect to assistance required, or offences committed by the many Europeans who are to be found in this settlement at all times. A Reformatory has lately been sanctioned and established, with a view of reclaiming the many young Somalee boys who have either lost or been deserted by their parents, and who have always been the most inveterate hands at petty theft. Much good is anticipated from this institution."

28. The following is an abstract of the result of the trials at Aden :—

Discharged on security.	Fined.	Flogged.	Imprisonment for one month.	Imprisonment for six months.	Imprisonment for one year.	Imprisonment for two years.	Imprisonment not exceeding five years.	Expulsion.	Total.
2	628	27	182	99	11	2	6	11	968

POLICE.

Town and Island of Bombay.

29. The tables submitted by the Senior Magistrate of Police are for the official year 1865-66. They contain useful information, and copies are therefore attached (*vide* statements No. 1 to 7).

30. Nine cases of murder and attempt to commit murder were brought before the Police Courts in the Town and Island of Bombay during the year under report. The corresponding number during the year 1864-65 was 5. There were also tried 6 cases of culpable homicide and attempt to commit culpable homicide, 18 of voluntarily causing hurt, 3 of robbery, 24 of abduction, &c., 15 of house-breaking, 2,177 of theft, 82 of receiving stolen property, 187 of embezzlement and breach of trust, 17 of perjury and conspiracy, and 2,273 of assault.

31. The following statement shows the number and nature of offences tried by the Police Magistrates in Bombay during the year 1865-66, as contrasted with those of the previous year:—

	Murder, and attempt to commit Murder.	Culpable Homicide, and attempt to commit Culpable Homicide.	Voluntarily causing hurt.	Robbery.	Abduction.	House-breaking.	Theft.	Receiving stolen Property.	Embezzlement and Breach of Trust.	Assault.	Perjury and Conspiracy.
1865-66 ..	9	6	18	3	24	15	2,177	82	187	2,273	17
1864-65 ..	5	1	10	5	28	14	1,961	55	165	2,319	14
Increase	4	5	8	..	..	1	216	27	22	..	3
Decrease	..	..	..	2	4	..	..	..	..	46	..

31. The returns furnished by the Senior Magistrate of Police also show that 25,763 persons were brought before the Magistrates during the year 1865-66 for various offences, including the cases which remained undisposed of at the close of the year. During the same period 171 criminals were convicted by the High Court, and 41 acquitted by the same tribunal; 18,577 were convicted, fined, imprisoned, flogged, or bound over to be of good behaviour, &c., and 6,874 persons were acquitted by the Magistrates; 7 persons were convicted and 3 acquitted by the Court of Petty Sessions, and the cases against 90 persons, including those committed for trial before the High Court, remained undisposed of at the close of the year 1865-66.

32. The returns also show that there is an increase of 2,903 in the number of persons brought before the Magistrates in 1865-66 as compared with the previous year, and an increase of 1,683 in the number of cases sent up during the same period.

33. The proportion of convictions in the High Court was 80 per cent. during the year 1865-66; in the several Police Courts the proportion was 72 per cent. and before the Court of Petty Sessions 70 per cent.

34. Of the persons convicted by the High Court 1 was sentenced to death, 36 to transportation, 133 to imprisonment, fine, flogging, &c., and 1 to flogging only; 6 persons were sentenced to imprisonment, and 1 to fine by the Court of Petty Sessions; 2,254 were sentenced by the Magistrates to imprisonment, 439 to flogging, and 15,630 to fine, and 254 were bound over to be of good behaviour, &c.

35. The following statement shows the castes to which the offenders brought before the Police Courts in Bombay belonged :—

Years.	Europeans.	Indo-Briton and Native Christians.	Hindoos.	Mahomedans.	Parsees.	Others and Unknown.	Total.
1865-66	2,100	1,136	15,779	5,758	804	186	25,763
1864-65	1,288	863	13,657	5,961	639	356	22,714
Increase	812	273	2,122	..	165	..	3,049
Decrease	..	...	..	203	..	170	..

36. From the statement it appears that there is a very large increase in the number of Europeans and Native Christians, and also in the number of Hindoos and Parsees. The Senior Magistrate of Police has stated in his report that the increase in the number of Europeans is partly accounted for by more European seamen having been brought for trial under the Merchant Shipping Act for refusal of duty.

37. The returns show that property of the value of Rs. 3,30,868-7-8 was believed to have been stolen. The corresponding sum during the previous year was Rs. 2,82,922-15-6. Of the sum alluded to, property of the value of Rs. 1,06,511-11-3 was recovered by the Police, showing a decrease of Rs. 11,213-0-5 in the amount recovered during the previous year. But with regard to this the Senior Magistrate of Police writes :—"As explained in previous reports, much of the property alluded to as having been stolen consists of large sums of money said to have been embezzled by agents of merchants, &c., and in such cases the Police cannot be expected to recover the money or property set down as stolen."

Years.	Amount of Property stolen.			Amount of Property recovered.		
	Rs.	a.	p.	Rs.	a.	p.
1865-66....	3,30,868	7	8	1,06,511	11	3
1864-65....	2,82,922	15	6	1,17,724	11	8
Increase....	47,945	8	2	....		
Decrease ..	....			11,213	0	5

MOFUSSIL.

38. With respect to the Northern Division of the Bombay Presidency, Mr. A. Rogers, Commissioner of Police for that Division, has submitted the following report for the year 1865-66 :—

"In the year just past there was not a single event of any note to mark it as one out of the ordinary course. Peace and tranquillity reigned throughout the division.

"There is nothing particular to remark with regard to the state of crime in 1865-66 as compared with former years. It is, however, satisfactory to know that there were no highway robberies of any magnitude, nor do the burglaries and other descriptions of theft call for any notice.

"As stated in the report of 1864-65, the great incentive to theft among the poorer orders was the dearness of

articles of food. The price of some of the cereals had fallen during the year under review, but the relief was not to the extent that could be desired.

"The dissatisfaction in the Police force of the Northern Division, noticed in last year's report, has, if anything, gone on increasing, owing to the delay in disposing of the late Colonel Bruce's proposals for its reorganization. Pending the decision of Government, the 3rd grade of privates has been entirely done away with, and the numerical strength of the 1st and 2nd grades augmented within the present sanctioned amount. This, however, was merely a make-shift. The pay they now receive, including grain batta, is still below what has been proposed by Colonel Bruce. The salaries of the upper ranks remain the same. The consequence of all this is that the men have become careless, and the Superintendents find much difficulty in enforcing anything like discipline and order among them. In fact they do not hesitate almost as a rule to throw up the service the moment they are found committing a fault or are sent to posts not agreeable to them.

"The Police along the lines of B. B. and C. I. Railway Company and the G. I. P. Railway Company has been placed under the management of Government, and arrangements are being made for a proper organization. Thefts at the several stations on both the lines had become very common, and as it was pretty evident that many of them were committed in collusion with the Railway Police and other officials, a complete change of system was necessary. The change has just been introduced. The next year's report will show its results."

39. Mr. Hadow, Acting Commissioner of Police Southern Division, has submitted the following report for 1865-66 for the districts in the Southern Division:—

"There has not been any occurrence of note during the year. The Police establishments continue generally on their

former footing, excepting in the Poona district, in which, as a temporary arrangement, pending the contemplated reorganization, the grade of third-class privates has been abolished, resulting in a decrease of 55 men, whose salaries have been availed of to increase the pay of the remaining third-grade privates to that of second-grade privates. The Superintendent of Police, Poona, however, reports that he has not derived the benefit he anticipated from the arrangement, as he is still unable to procure men for the Police, in which there were at the date of his report about 50 vacancies in consequence.

"This difficulty of procuring men for the Police is felt more or less in all the districts, and will probably continue to be felt until the reorganization of the entire Police establishments, which is under contemplation by Government, is effected.

"The Mounted Police also continues on its former footing. If the Jahgeerdars, who furnish the contingents of Horse, now employed on Police duty in the Poona, Sattara, and Kulladghee districts, will consent to the arrangements recently proposed to them, it is hoped that the present state of matters will shortly be remedied, and an efficient body of Mounted Police obtained for employment in the Southern Division.

"Compared with the year 1864, there has been a decrease amounting to nearly 6 per cent. in the total number of crimes of all descriptions committed in the Southern Division during the year 1865. In the districts of Dharwar, Canara, Rutnagherry, Sattara, Kulladghee, and Belgaum the total number of crimes is smaller than in the preceding year, but in the Poona district, including Sholapoor, and in the Ahmednuggur district, there has been an increase. In the latter, however, the increase is entirely in offences of a petty nature.

"As regards crimes of a serious nature, there is a decrease amounting to about 24 per cent. in the number of murders

for the entire division, and a decrease of about 9 per cent. in the number of highway robberies, as compared with the preceding year. In the number of gang robberies, however, there has been an increase, the number being more than double that of the preceding year. This increase is attributable mainly to the large number of gang robberies that had been committed by the Kolees in the early part of the year in the western ghaut villages of the Poona district. Active and efficient measures were, however, adopted by the Superintendent of Police, Major Shortt, which soon resulted in the apprehension of the leaders of these gangs, and the subsequent conviction and punishment of the offenders has had the desired effect of putting down the Kolees, who were a source of much annoyance and dread to the peaceable inhabitants of the Mawullee villages.

"The crime of burglary also shows an increase amounting to 46 per cent. in the total number of cases for the entire division. This increase, however, is not general, as the returns of the city and district of Poona, as well as of the Canara and Rutnagherry districts, compare very favourably with those of the preceding year. The increase is principally in the Dharwar, Sattara, and Kulladghee districts. The Superintendent of Police, Dharwar, attributes the increase of this crime in his district to the facilities with which native houses can be broken into, and he states that the matter is engaging his best attention. The Superintendent of Police, Kulladghee, on the other hand attributes the increase of this crime in his district to the scarcity caused by the failure of the crops of the past year.

"Another important case of theft of cotton during the voyage of native crafts between Coompta and Bombay was brought to light through the exertions of Mr. Campbell, as Superintendent of Police, Canara, and some of his subordinate Police. In this case likewise the criminals have been

punished, and it is to be hoped that the examples that have been made will prove beneficial to the cotton trade between the abovenamed ports in future.

"New Police lines for the head-quarters of the Canara Police have been erected at Karwar during the year. These lines have cost Government about Rs. 36,000, and they are sufficient to afford accommodation for 300 men. A good hospital has also been built for the Police. It will be satisfactory to Government to learn that the disease known as the Canara ulcer, from which so many of the Police have suffered, as many as 25 men being laid up at one time, is gradually disappearing, and that fever also, though rife during the early months of the year under report, has now considerably lessened.

"The fencing of wells as a protective measure has, through Mr. Campbell's exertions, been also extensively effected in the Canara district. I have endeavoured, though as yet with little success, to carry out this measure in the other districts of the Southern Division also. In Rutnagherry it has long been the practice to have the wells covered with strong bamboo lids, with small apertures for drawing water from. The practice was there also introduced by Mr. Campbell, and has, I understand, succeeded well."

SIND.

40. The Commissioner in Sind has furnished the following report with regard to the Sind Police for the calendar year 1865:—

"The following statement shows the number of thefts and robberies in the province in 1864, and also during the year under report:—

	Number of Thefts and Robberies committed.	Amount of Property stolen.	Amount of Property recovered.	Percentage of Property.
		Rs.	Rs.	Rs.
Kurrachee.				
1864	2,640	1,00,001	50,102	50·125
1865	2,588	1,05,196	61,893	58·835
Increase	....	5,195	11,791	8·710
Decrease	52	....	....	....
Hydrabad.				
1864	2,565	98,021	52,577	53·
1865	3,009	1,43,690	72,859	50·706
Increase	444	45,669	20,282	....
Decrease	....	....	....	2·294
Shikarpoor.				
1864	3,195	1,35,370	44,373	32·78
1865	2,793	1,02,963	46,700	45·36
Increase	....	....	2,327	12·58
Decrease	402	32,407	....	....
Frontier.				
1864	563	26,074	4,223	16·19
1865	549	17,575	4,660	26·51
Increase	....	....	437	10·32
Decrease	14	8,499	....	....
Thur and Parkur.				
1864	384	19,366	13,697	70· 7
1865	410	19,730	13,472	68·28
Increase	26	364	225	....
Decrease	....	....	....	2·42

"The results shown in the above table are more satisfactory than those of last year. It is true that the number of cases of theft has not decreased, and the amount of property stolen has increased. The amount recovered, however, has increased in a far greater proportion; but though this is proof that the Police have made greater exertions in detecting crime, it is to be regretted that crime should be so frequent."

ADEN.

41. The following report regarding the Aden Police by Lieutenant Goodfellow, Assistant Political Resident at Aden, has been submitted by the Resident at Aden :—

"The Police has in ... efficient by the late ... been made much more class of men is now ... of increase of pay, and a better a matter of ... ainable for service in the force, which is small for the ... satisfaction. The numbers, however, still are thorough supervision of so scattered a place as Aden, and with its gradual development, I respectfully submit, will have to be augmented before long.

"The addition of three European Constables for service here has likewise rendered the transaction of public business in the case of European offenders, sailors and others, far more pleasant to the executive officers under you than was formerly the case, and has and will no doubt continue to prevent unnecessary complications.

"The three Constables selected from the troops serving here have already given ample proof of their ability and judgment for the particular description of duty for which they have been chosen, and I have no hesitation in stating that I am confident that the sanction accorded by Government for the establishment of these Constables will never have to be regretted.

"The conduct of the Police during the past year has been exemplary, and the arrangements carried out by Subedar Bhickoo Suckoo, during the trying times at the commencement of the year, reflect great credit on himself and the force generally."

JAILS.

42. The following report is from Dr. C. G. Wiehe, the Inspector-General of Prisons, and is for the official year 1865-66 :—

1. Poona.
2. Sattara.
3. Sholapoor.
4. Ahmednuggur.
5. Dhoolia.
6. Tanna.
7. Rutnagherry.
8. Honore.
9. Dharwar.
10. Kulladghee
11. Surat.
12. Kaira.
13. Dohud.
14. Ahmedabad.
15. Rajkote.
16. Kurrachee.
17. Hydrabad.
18. Shikarpoor.
19. Aden.

Subordinate Jails.

20. Yerrowda.
21. Belgaum.
22. Karwar.
23. Bukkur Fort.

"During the year [illegible]66 there were 24,2[illegible]risoners confined in the j[illegible]ils as per margin in this Presidency, being an increase of 4,009 over the numbers for the previous year.

"This increase is partly due to the prisoners at Dohud, Rajkote, Karwar, and Kulladghee being for the first time included in the returns; but this will account for but a small portion of the excess; the remainder may therefore be considered a *bonâ fide* increase in the actual number of prisoners.

Number and disposal of Prisoners.

"These details are given in the following table:—

	1865-66.			1864-65.		
	Males.	Females.	Total.	Males.	Females.	Total.
Remaining in confinement at the close of the year..	5,524	292	5,816	5,044	322	5,366
Received during the year..	17,620	862	18,482	14,101	822	14,923
Total population....	23,144	1,154	24,298	19,145	1,144	20,289
Transported beyond seas..	792	51	843	215	15	230
Transferred to other districts	3,396	43	3,439	1,788	8	1,796
Released	12,098	772	12,870	11,922	824	12,746
Escaped.....	35	....	35	30	....	30
Died	641	10	651	242	5	247
Executed	56	1	57	48	5	53
Remaing on the last day of the year	6,126	277	6,403	4,900	287	5,187
Aggregate number of prisoners in the year	2,207,050	101,627	2,308,677	2,000,240	121,315	2,121,555
Daily average number of prisoners	6,209	276	6,485	5,479	32	5,806

"The daily average number was 6,485 against 5,806 during the previous year, showing an increase of 679 prisoners.

"In the following table are given the strength and disposal of the prisoners confined in the jails in Sind. These data are included in the previous table, and have here been extracted for separate comparison. The numbers for the year under report amount to 6,623 against 5,075 during 1864-65, being an excess of 1,548 prisoners:—

	1865-66.			1864-65.		
	Males.	Females.	Total.	Males.	Females.	Total.
Remaining in confinement at the close of the year..	1,216	24	1,240	1,421	26	1,447
Received during the year..	5,256	127	5,383	3,547	81	3,628
Total....	6,472	151	6,623	4,968	107	5,075
Transferred for transportation beyond seas	377	35	412	68	3	71
Transferred to other districts..	1,323	2	1,325	791	....	791
Released	2,712	90	2,802	2,799	77	2,876
Escaped	14	....	14	14	....	14
Died	223	1	224	71	1	72
Executed	15	....	15	9	2	11
Remaining on the last day of the year.....	1,808	23	1,831	1,216	24	1,240
Aggregate number of prisoners during the year..	630,025	8,314	638,339	536,784	10,362	547,146
Daily average number of prisoners	1,839	23	1,862	1,471	28	1,499

"In addition to the jail population given above, inclusive of Sind, there were on an average 276 prisoners employed on the canals in the Thur and Parkur districts, making the total jail population of the Presidency at 24,574.

"These numbers, however, do not include the prisoners confined in the lock-ups or permanent subordinate jails

throughout the districts. There contained during the past year, according to the returns received, 46,786 prisoners. Of this number 4,370 were in confinement at the close of the previous year, and 42,416 were admitted during that under report.

"The criminal population may therefore be estimated at 71,360 in this Presidency, inclusive of Sind and Aden.

Employment of Prisoners.

"The manner in which the number of prisoners, viz. 6,067, sentenced to rigorous imprisonment was employed is detailed below :—

Mode of Employment.	1865-66.	1864-65.
Employment on manufactures	1,450	1,636
Do. as jail servants	824	809
Hired by Public Works Department	520	124
Do. other Departments	309	373
Employed on miscellaneous works	1,428	1,283
Working on the roads, &c.	129	188
Inefficient and excused from works	964	1,012
Employed in constructing jail buildings, &c.	443	....
Total	6,067	5,425

"The average number of untried and civil prisoners was 173, and of those sentenced to simple imprisonment 245.

Financial results.

"The financial results of intramural employment in the factories are given in the following table:—

	1865-66.	1864-65.
	Rs. a. p.	Rs. a. p.
Value of manufactured articles sold..	1,15,518 2 7	1,16,006 10 4
Do. used for public purposes..	17,822 10 5	19,745 12 3
Do. in store at the close of the year	70,712 3 2	51,895 1 0
Total....	2,04,053 0 2	1,87,647 7 7
Deduct value of manufactured articles in store at the end of the preceding year, ...	51,895 1 0	39,217 13 2
Gross receipts of the year	1,52,157 15 2	1,48,429 10 5
Deduct cost of raw material, &c. ...	1,06,221 2 11	1,02,931 6 7
Net profit of the year	45,936 12 3	45,498 3 10
Average earning per prisoner	31 10 11	27 12 11

"The manufacturing transactions as given above amounted to Rs. 2,04,053-0-2 against Rs. 1,87,647-7-7 during the previous year. There was also an increase in the net profits, as well as in the earning of each prisoner, which though small is encouraging.

Cost of maintenance.

"The following comparative table gives the gross and net cost of maintenance under every head of expenditure:—

Number of Prisoners. In 1865-66..... 6,485 In 1864-65.....5,806	1865-66.			1864-65.		
	Rs.	a.	p.	Rs.	a.	p.
Rations	2,91,060	9	2	2,47,251	3	7
Money allowance	7,042	10	9	1,959	3	11
Total	2,98,103	3	11	2,49,210	7	6
Cost per prisoner	45	15	6	42	14	9
Fixed establishments, including guards and their reliefs	2,69,481	0	11	1,50,707	14	1
Cost per prisoner	41	8	9	25	15	4
Extra establishments	2,259	13	1	12,769	0	7
Cost per prisoner	0	5	7	2	3	2
Total	2,71,740	1	0	1,63,476	14	8
Cost per prisoner	41	14	4	28	2	6
Hospital Charges. Pay of hospital assistants	5,912	10	2	5,610	0	0
Cost per prisoner	0	14	8	0	15	5
Europe medicines	2,763	9	0	555	12	3
Cost per prisoner	0	6	9	0	1	6
Bazaar medicines	3,758	7	4	2,640	12	7
Cost per prisoner	0	9	4	0	7	3
Sick diet	7,935	8	6	3,602	5	0
Cost per prisoner	1	3	7	0	9	11
Furniture, bedding, and extra blankets	719	15	6	1,279	9	5
Cost per prisoner	0	1	10	0	3	6
Total	21,090	2	6	13,688	7	3
Cost per prisoner	3	4	2	2	5	8
Clothing, including blankets and bedding	50,724	9	2	24,231	3	1
Cost per prisoner	7	13	2	4	2	9
Contingencies, including stationery	44,069	3	8	19,185	15	8
Cost per prisoner	6	12	8	3	4	11
Additions, alterations, and repairs	10,838	3	5	11,645	13	10
Cost per prisoner	1	10	9	2	0	1
Gross cost of maintenance	6,96,561	4	8	4,81,438	14	0
Gross cost per prisoner	107	6	7	82	14	8
Deduct value of labour	1,51,040	1	2	77,656	4	7
Net cost of maintenance	5,45,521	3	6	4,03,782	9	5
Net cost per prisoner	84	1	11	69	8	8

"The total gross cost of maintenance was Rupees 6,96,561-4-8 against Rs. 4,81,438-14 during the previous year, and the gross cost per prisoner was Rs. 107-6-7 against Rs. 84-14-8 for 1864-65. The increase therefore per prisoner has been Rs. 24-7-11, which is due to the following items, viz. Rs. 15-9-5 per prisoner in the cost of guards and establishment, Rs. 3-0-9 in rations, Rs. 3-10-5 in clothing, and Rs. 3-7-9 in contingent charges.

"In explanation of this increase it is to be observed that with regard to the first item the cost of the jail guard* only was included in last year's report, but as it appears that a wing of a regiment is stationed at Tanna solely for the purpose of affording guards to the jail and sa it is probably right that this charge should be shown for the information of Government in its entirety, the cost of the wing, about Rs. 73,592, has now been included; the cost of guards and establishment at Tanna is thus represented by Rs. 79,520-13-2.

* Tanna Jail.

"This charge for military guards is so extravagant and disproportionate as to preclude the possibility of any but unfavourable financial results, and it is mainly to the fact that military guards are employed where police contingent guards could be so much cheaper, and it is believed more efficient, that the jails, in this Presidency appear at so great a financial disadvantage as compared with other parts of India.

"The increase in rations is due to the increasing prices of grain and other necessaries, and to the increase in the number of prisoner; in clothing also to the increase in prisoners, and to the fact, that in the previous year's adjustments had in some cases been delayed till the present years and in contingencies to the heavy charges for transfers to relieve overcrowding.

"The value of convict labour has increased from Rupees 77,656-4-7 in 1864-65 to Rs. 1,51,040-1-2; this decreases the cost of maintenance from Rs. 6,96,561-4-8 to Rs. 5,45,521-3-6, and brings the net cost per prisoner down to Rs. 84-1-11 against Rs. 69-8-8 in the preceding year.

"By, however, deducting the increase in the cost of guards at Tanna, and showing only the charge included in last year's returns, the gross cost per prisoner stands at Rs. 97-0-3 and the net cost at Rs. 73-11-7, leaving a small increase of Rs. 4-2-11 over the previous year's transactions, notwithstanding a large augmentation in the receipts or in the value of convict labour credited to the jails.

"The mortality during the year has been very exceptional. The jails at Ahmedabad, Hydrabad, and Yerrowda were visited by a low type of fever, and diarrhœa which was extremely fatal.

Mortality.

"The total number of deaths was 651 against 247 in the previous year. There were 248 deaths from fever, 128 from diarrhœa, 76 from cholera, 71 from dysentery, and 128 from other diseases.

"Of the 651 fatal cases, 224 occurred in the Sind jails. Of these 63 were from fever, 78 from diarrhœa, 42 from dysentery, 7 from cholera, and 34 from other causes. Of these 224 deaths, 153 took place in the jail at Hydrabad alone.

"In the jail at Ahmedabad there were 158 deaths from the causes already mentioned, and at the temporary central prison at Yerrowda the mortality was 77, giving a total of 408 deaths in these three jails, but in the remaining 20 jails the deaths amounted only to 243.

"The ratio per cent. of mortality to the average strength from all causes was 10·04 against 4·3 during the previous year, but excluding the exceptional mortality in the three jails

above mentioned, the ratio per cent. was 4·9, which may be considered as the normal rate.

"At Hydrabad this exceptional mortality was due to causes which were at the time brought to the notice of Government, such as the extreme coldness and dampness of the last winter season in Sind, the introduction of sick prisoners from the canal works in the Thur and Parkur districts, also partially to overcrowding, and probably to clothing which was found insufficient as a protection against the cold of so unusually severe a season. The health of the jail has since been very satisfactory and continues to be so.

"At Ahmedabad the epidemic was due to causes not very clearly determined. The President of the Sanitay Commission, who had been desired by Government to report on the sickness and mortality in the jail, states in the 47th paragraph of his report that 'it has not been ascertained whether this jail epidemic originated in any imported germ of disease, or resulted from the unwholesome conditions that were in existence, viz. a febrific poison that was very active in May, great and unusually prolonged heat, overcrowding at night in the foul air of hot close cells, foul drinking-water, and defective, probably also unwholesome food. Whether a communicable disease was generated in the jail, or only the imported seeds of such a disease were propagated, there is much reason to attribute the fact of the fever having become epidemic there to the insanitary condition of the prison and its inmates.'

"It was quite within the power of the local officers to have corrected this 'insanitary condition' as specified above, or to have reported its existence for immediate remedy. This, however, was effected as soon as the state of things became known; but the delay, which was entirely due to the local officers, had then already been productive of very fatal results.

"The conservancy of the jail however, as described in the 23rd paragraph of the President's report, was found to be very satisfactory. It is said that 'the several courts of the prison were scrupulously clean, and the floors of the dormitories well swept, and their walls and roofs clean and white. The latrines were in a very satisfactory state, such as could be maintained only in a jail. Soil vessels and earth were used, and the refuse was carried away to a distant place of deposit, at least as shown by the contractor's charges in contingent bills. This was done up to the 8th July and after the 20th September. During the ten weeks between those two dates the night-soil was deposited in trenches in garden ground outside the western wall. At the latter date this inhumation was stopped on the representation of the medical officer, who was apprehensive that it was hurtful to those under his care. The measured distance of the trenches from the nearest dormitory of the prison is a hundred and twenty-eight yards, but there are several houses of townspeople in close proximity to them. The pits have been closed and covered with two feet depth of earth, and in the present dry state of the air they do not cause any nuisance perceptible to the sense of smell. It has been arranged to lay charcoal over them, and above it more earth, to avert any possible evil from the putrefaction of their contents. It would be highly objectionable to make filth-pits again in that place.'

"These trenches under the precautions observed were in my opinion perfectly innocuous, and they have continued so up to this time. The jail is now healthy.

"There was no epidemic sickness at the temporary central prison at Yerrowda, although the mortality was comparatively high. This was not altogether unexpected in a jail composed of prisoners collected from Gujarat, Khandeish, the Konkun, and parts of the Deccan, each district as varying in climate as in the ordinary food and habits of the people.

"The change also from the intramural and comparatively less rigorous description of employment in the jails, to the exposure and really hard labour at Yerrowda has also tended to increase the sickness and mortality. The weak and those in whom the seeds of disease were already latent succumbed, but the comparatively healthy have on the contrary improved in health and appearance.

"The diet in force is based on the sanctioned standard scale, and by frequent variations is brought as near as possible to conform to that in use by the prisoners when at liberty. In accordance with the recommendation of the President of the Sanitary Commission, with whose concurrence the old scale was introduced, there has now been permitted an increase of oleaginous matter from half an ounce to one ounce, and of salt from five drachms to half an ounce.

"This change, originally recommended in the case of Ahmedabad, has been made general.

Escapes.

"There were 35 escapes during the year against 30 in 1864-65; 14 of these occurred from the jails and Public Works gangs in Sind.

"Of the 35 escapes 19 occurred from extramural gangs and 16 from within jail walls. The recaptures amounted to 19, 18 of which were convicts escaped during the year under report, and one during the previous year; 16 are still at large.

Education.

"Out of the 18,482 prisoners admitted into the jails during the year, 772 were able to read and write. Of these 2 were females; 229 were considered fairly educated for their position in life, and the remaining 17,481 were totally ignorant.

General observations.

"On the 1st of December 1865, Act IV. of 1865, for the regulation of Mofussil jails, and the enforcement of discipline therein, came into force, and under its provisions the District Judges,

were relieved of the charge of jails, and this duty was invested in Civil Surgeons.

"By this means divided authority, which had in many instances been found obstructive, has been abolished, and the general management and control of the jails have been placed by legislative enactment on a much more definite and satisfactory footing.

"The introduction also of the Jail Rules recently sanctioned by Government as an experimental measure has supplied a want which has been long felt, and will tend to uniformity of practice in all the jails, and it is to be hoped to much improvement in the financial results, as well as in their disciplinary management. A modified diet table has been introduced into this manual of rules, which it is anticipated will promote the health of the prisoners.

"The temporary jail at Yerrowda, in the vicinty of Poona, has been organised with the double object of relieving the overcrowding which was becoming excessive in many of the district jails, and of collecting and training a large number of prisoners for the purpose of building the new central jail sanctioned by Government.

"At the suggestion of the Inspector-General of Prisons, and under the sanction of the Government of India, the proceeds of jail labour, which had hitherto been paid into the Treasury as Imperial income, have been permitted to be formed into a jail local fund for the purpose of constructing new buildings, and making additions and alterations to those which already exist.

"The jail establishments have also been revised, and the scale proposed by the late Commissioner for the revision of civil subordinate salaries has received the sanction of the Government of India, and was introduced on the 1st of May last.

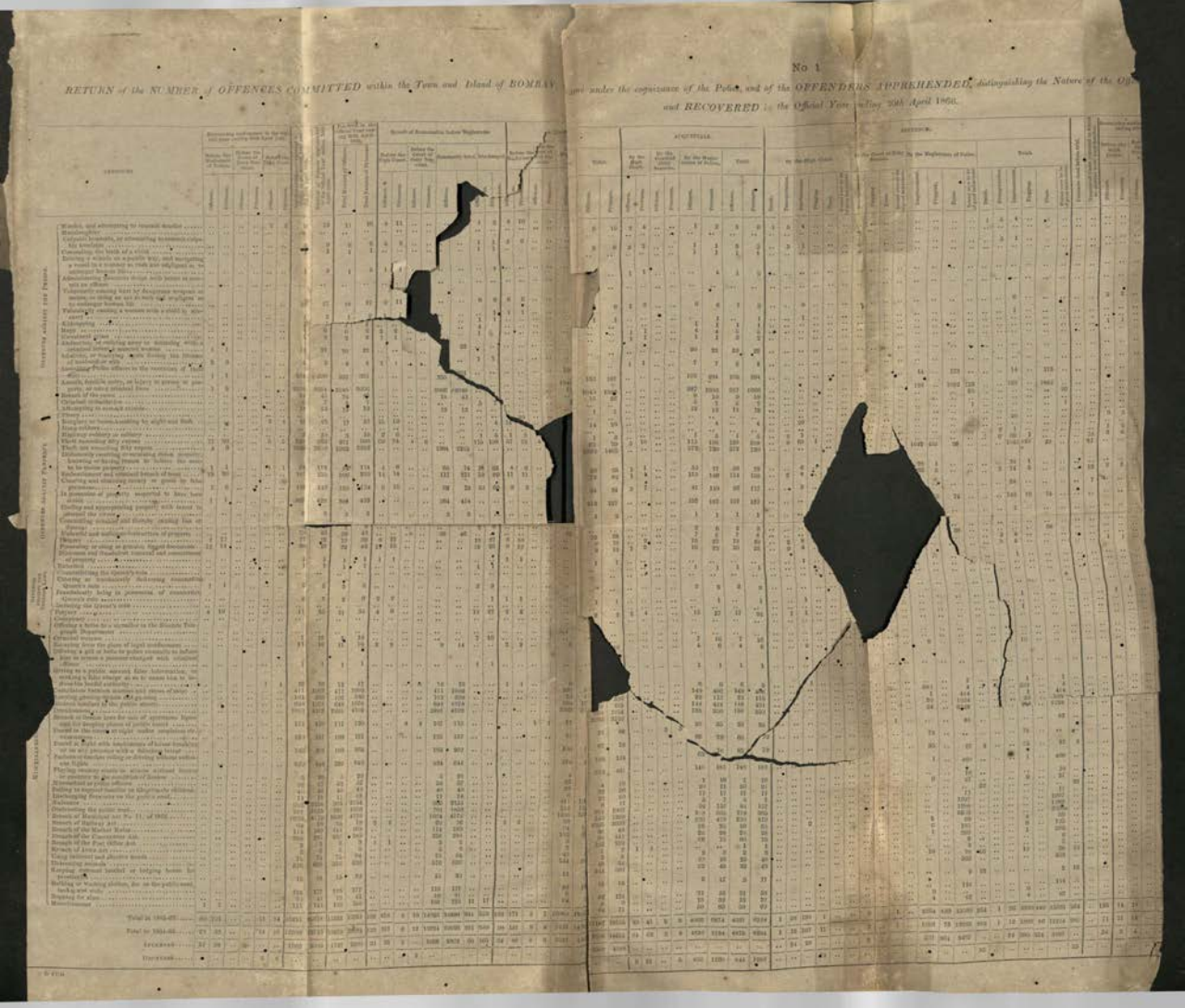
"These important measures indicate an amount of progress towards a more sound system of jail management, which cannot but lead to satisfactory results."

...ts, and the Result of the Accusations together with the AMOUNT of PROPERTY STOLEN

Number of Persons charged with Offences specified in Returns	Amount of Property stolen and recovered: Reported as stolen	Recovered	Believed to be first reported fraudulently	Believed to have been actually stolen	Persons	Juvenile Offenders under Sixteen Years of Age	Housebreaking	Robbery and Stealing from the Person	Forgery	Coining	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
13	.....	.....	.....	.....	1	1	1	1	..	..	10
..	.....	.....	.....	.....	..	..	..	..	..	..	..
9	.....	.....	.....	.....	1	..	1	..	..	..	7
..	.....	.....	.....	.....	..	..	..	..	..	..	..
5	.....	.....	.....	.....	..	..	5	..	..	..	5
..	.....	.....	.....	.....	..	..	..	..	..	..	..
21	.....	.....	.....	.....	1	..	10	4	1	..	16
2	.....	.....	.....	.....	..	..	2	..	..	..	2
3	.....	.....	.....	.....	..	..	3	..	..	..	3
2	.....	.....	.....	.....	..	..	2	..	..	..	2
22	.....	.....	.....	.....	..	..	17	3	1	1	23
6	.....	.....	.....	.....	..	..	5	..	1	..	6
221	.....	.....	.....	.....	21	10	178	104	12	10	306
2057	.....	.....	.....	.....	262	101	1544	532	151	34	2917
43	.....	.....	.....	.....	1	..	32	1	4	..	44
7	.....	.....	.....	.....	..	..	4	..	..	..	4
13	.....	.....	.....	.....	..	..	5	3	1	..	9
29	6,696 19 9	3,154 0 0	.....	6,696 19 9	..	..	11	3	..	..	17
10	265 0 0	161 12 0	.....	265 0 0	..	..	9	..	..	..	9
761	2,29,510 3 4	67,805 3 10	4,750 2 0	2,25,060 0 6	10	3	164	75	10	1	300
2245	21,408 3 10	10,412 14 11	923 6 6	20,505 3 10	37	20	1220	432	91	35	2235
114	.....	.....	.....	.....	1	..	60	6	45	7	120
352	58,250 15 4	10,850 10 0	.....	58,250 15 0	23	3	155	8	5	1	200
161	10,820 3 0	2,931 4 2	.....	10,820 3 0	9	..	67	105	23	7	1	154
479	4,115 0 0	4,115 0 0	.....	4,115 0 0	6	10	2	233	34	121	3	7	..	6	386
8	80 3 6	80 3 6	.....	80 3 6	..	..	..	3	..	1	..	..	..	..	7
6	.....	.....	.....	.....	..	..	..	1	..	..	..	..	..	..	1
27	.....	.....	.....	.....	2	..	15	1	..	..	..	..	..	..	5
47	.....	.....	.....	.....	2	..	24	..	3	..	..	..	..	..	29
42	.....	.....	.....	.....	..	..	34	..	3	..	..	..	..	..	37
1	89 0 0	89 0 0	.....	89 0 0	..	..	1	..	..	..	..	..	..	..	1
1	.....	.....	.....	.....	..	..	1	..	..	..	..	..	..	..	1
3	.....	.....	.....	.....	..	..	2	..	1	..	..	..	..	..	3
3	.....	.....	.....	.....	..	..	2	..	1	..	..	..	..	..	3
55	.....	.....	.....	.....	1	..	25	5	1	..	..	..	..	..	32
..	.....	.....	.....	.....	..	..	..	..	..	..	..	..	..	..	..
16	.....	.....	.....	.....	..	..	9	..	2	..	..	..	..	..	11
30	.....	.....	.....	.....	..	..	20	1	1	..	..	..	..	..	22
1	.....	.....	.....	.....	..	..	1	..	..	..	..	..	..	..	1
17	.....	.....	.....	.....	..	..	11	..	..	3	..	..	..	..	17
2002	.....	.....	.....	.....	266	18	1	1	1	1	1	1	1	1	1
930	.....	.....	.....	.....	..	57	105	2	102	77	11	..	..	..	1
2038	.....	.....	.....	.....	13	98	3	956	1	401	15	12	..	13	1
4048	.....	.....	.....	.....	302	3	993	11	2230	1	786	25	49	39	4
122	.....	.....	.....	.....	4	..	2	2	65	2	15	2	2	1	1
107	.....	.....	.....	.....	2	..	11	..	48	..	26	..	..	..	1
206	.....	.....	.....	.....	10	..	..	..	113	5	70	..	7	..	1
5	.....	.....	.....	.....	..	..	..	..	677	..	133	..	13	..	1
26	.....	.....	.....	.....	..	..	..	..	16	..	12	..	..	..	..
57	.....	.....	.....	.....	..	..	..	..	40	..	12	..	..	..	..
40	.....	.....	.....	.....	1	..	..	..	12	..	17	..	..	..	..
16	.....	.....	.....	.....	1	..	..	..	14	..	1	..	..	..	..
2158	.....	.....	.....	.....	1	..	..	..	1	..	..	..	..	..	..
1135	.....	.....	.....	.....	11	..	..	..	1	..	..	..	..	..	..
1135	.....	.....	.....	.....	11	..	..	..	1	..	..	..	..	..	..
4155	.....	.....	.....	.....	11	1	2	..	1	..	..	..	..	..	..
716	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
102	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
1	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
3	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
4	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
4	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
636	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
32	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
1	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
44	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
146	.....	.....	.....	.....	..	..	..	..	1	..	..	..	..	..	..
47

No 1

RETURN of the NUMBER of OFFENCES COMMITTED within the Town and Island of BOMBAY ... under the cognizance of the Police, and of the OFFENDERS APPREHENDED, distinguishing the Nature of the Of... and RECOVERED ... the Official Year ending 30th April 1866.



No. 2.

COMPARATIVE STATEMENT of OFFENCES brought to the notice of the Magistrates of Police during the Official Years 1903-05 and 1905-06.

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No. 3.

RETURN of Coroner's Inquests held in Bombay during the Official Year ending 30th April 1866, compared with those held during the preceding Year.

	CAUSES OF DEATHS.	1864-65.	1865-66.	Increase.	Decrease.
	Homicides — Murder	9	6	..	3
	Homicides — Culpable homicide	5	7	2	..
	Homicides — Ditto agency unknown	..	4	4	..
	Poisoning, agency unknown	2	..	2	..
Suicides.	"Felo-de-se." — Poisoning	2	2	..	..
Suicides.	"Felo-de-se." — Drowning	..	12	12	..
Suicides.	"Felo-de-se." — Shooting	1	..	..	1
Suicides.	State of mind unknown. — Posoning	..	2	2	..
Suicides.	State of mind unknown. — Drowning	6	11	5	..
Suicides.	State of mind unknown. — Hanging	4	2	..	2
Suicides.	During temporary insanity. — Poisoning	1	..	..	1
Suicides.	During temporary insanity. — Drowning	6	2	..	4
Suicides.	During temporary insanity. — Cutting and wounding	1	1	..	..
Suicides.	Drowning while delirious from fever	..	..	..	..
Suicides.	Drowning under influence of strong liquor	4	2	..	2
Suicides.	Shooting while under the influence of do.	1	..	..	1
Casual Deaths.	Explosion of gunpowder	2	3	1	..
Casual Deaths.	Accidental poisoning	2	..	..	2
Casual Deaths.	Falls of quarry rocks	1	..	..	1
Casual Deaths.	Falls of stones	1	..	..	1
Casual Deaths.	Falls of earth and stones while digging	5	13	8	..
Casual Deaths.	Falls of buildings	..	..	..	..
Casual Deaths.	Falls of trees	..	..	..	..
Casual Deaths.	Falls from trees	3	8	5	..
Casual Deaths.	Falls from scaffolding	4	..	..	4
Casual Deaths.	Falls from houses and ships	21	24	3	..
Casual Deaths.	Falls from carts and carriages	1	..	..	1
Casual Deaths.	Falls from quarry rocks	..	2	2	..
Casual Deaths.	Falls from horses	..	1	1	..
Casual Deaths.	Injuries from carts and carriages	6	4	..	2
Casual Deaths.	Injuries from horses	..	3	3	..
Casual Deaths.	Injuries from quarry rocks while blasting	5	..	..	5
Casual Deaths.	Injuries from fire	2	..	..	2
Casual Deaths.	Burnt in a house on fire	3	1	..	2
				39	

CAUSES OF DEATHS.		1864-65.	1865-66.	Increase.	Decrease.
Casual Death—*continued.*	Injuries from scalding	..	6	6	..
	Accidents on ship board	12	20	8	..
	Accidents from railways	27	38	11	..
	Accidents from machinery	3	1	..	2
	Injuries from a bullock	..	2	2	..
	Accidents, miscellaneous	13	22	9	..
How caused, unknown.	Fracture of the leg	..	..	..	..
	Abcess from injuries	..	1	1	..
Tetanus		2	1	..	1
Drowning..	Accidental	42	34	..	8
	Found drowned	31	30	..	
Natural deaths		14	53	39	..
	Total....	249	318	69	..

No. 4.

RETURN of Cases disposed of by the Court of Petty Sessions during the Official year ending the 30th April 1866.

Offences.	Number of Cases disposed of by the Court.	Number of Persons tried.	Convicted.	Acquitted and Discharged
Theft exceeding fifty rupees	4	6	6	..
Breach of the Opium Laws	4	4	1	3
Cases against Municipal Act No. II. of 1865.	8	9	3	6
Total in 1865-66....	16	19	10	9
Total in 1864-65 ...	9	15	4	11
Increase....	7	4	6	..
Decrease....	..	..	..	2

		Affirmed or allowed.	Dismissed or withdrawn.
Appeals under Municipal Act No. II. of 1865	24	8	16

No. 5.

RETURN showing the Offences for which persons of the age of fourteen years and under were brought before the Magistrates of Bombay from 1st May 1865 up to 30th April 1866.

Offences.	Committed.	Discharged.	Total.
Theft	142	56	198
Dishonestly receiving stolen goods, knowing the same to have been stolen	1	3	4
Embezzlement or criminal breach of trust	..	2	2
Cheating or obtaining money or goods by false pretences	..	2	2
In possession of property which may be reasonably suspected to be stolen	7	9	16
Assaulting Police Officers in the execution of their duty	..	4	4
Assault, forcible entry, or injury to person or property	6	15	21
Gambling	14	6	20
Riotous conduct on the public road	6	5	11
Drunkenness	8	3	11
Breach of licence laws for sale of spirituous liquor and for keeping places of public resort	1	..	1
Found in the streets at night under suspicious circumstances	..	2	2
Found at night with implements of house-breaking or on any premises with a felonious intent	1	4	5
Furious or careless riding or driving, or driving without sufficient lights	5	8	13
Playing country music in streets without licence	..	3	3
Discharging fireworks in the public road	..	4	4
Nuisance	34	8	42
Obstructing the public road	47	40	87
Breach of Municipal Act No. II. of 1865	4	1	5
Breach of Railway Act	3	5	8
Breach of Market Rules	3	..	3
Breach of the Conveyance Act	18	5	23
Ill-treating animals	20	2	22
Begging for alms	..	2	2
Bathing or washing clothes, &c. on the public road, tanks, and wells	1	1	2
Negligent in driving cattle	..	1	1
Smoking cheroots near the Cotton bales	..	1	1
Total in 1865-66	321	192	513
Total in 1864-65	293	227	520
Increase	28	..	..
Decrease	..	35	7

No. 6.

RETURN of MORTALITY for the Town and Island of Bombay for the Official Year ending 30th April 1866.

	Europeans.			Indo-Briton and Indo-Portuguese.			Native Christians and Jews.			Mahomedans.			Parsees.			Jains and all Hindoos.			Other and unknown Caste.			Total.			Grand Total.
	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	
1865.																									
May	46	24	1	5	1	..	79	45	1	794	147	8	89	15	..	1,707	532	24	8	9	..	2,728	773	34	3,535
June	45	5	1	8	1	1	58	14	..	481	45	2	110	11	1	1,171	197	16	6	7	1	1,879	280	22	2,181
July	37	8	3	9	1	..	83	9	1	394	34	14	88	6	..	1,140	96	23	2	..	2	1,753	154	43	1,950
August	41	..	3	2	1	..	45	3	..	405	25	5	79	1	2	1,146	53	9	10	..	..	1,728	83	19	1,830
September	28	1	2	5	..	..	43	3	1	535	..	7	73	7	1	1,064	29	13	6	..	1	1,754	47	25	1,826
October	19	1	3	4	..	..	35	2	..	353	8	5	44	2	2	989	30	13	3	..	..	1,447	43	23	1,513
November	15	1	3	2	..	..	30	1	1	325	9	8	68	4	..	863	26	14	8	..	..	1,311	41	26	1,378
December	24	..	4	3	..	..	43	1	4	327	9	4	68	4	..	858	32	22	1	..	1	1,324	46	35	1,405
1866.																									
January	18	..	3	3	1	..	40	..	..	349	28	1	45	4	2	948	58	19	5	..	..	1,408	97	25	1,530
February	9	1	..	1	..	1	46	19	1	362	47	4	52	12	1	882	120	15	4	..	..	1,356	199	25	1,580
March	19	6	7	1	1	1	47	14	1	338	97	2	58	22	..	1,010	262	19	2	..	1	1,475	407	31	1,913
April	28	2	1	1	..	..	41	1	..	361	103	4	76	15	..	978	271	16	1	..	1	1,486	405	22	1,913
Total in 1865-66	329	49	31	44	6	3	590	136	10	5,024	559	64	850	103	9	12,756	1,706	206	56	16	7	19,649	2,575	330	22,554
Total in 1864-65	370	95	26	29	3	1	511	221	14	5,955	1,040	59	821	235	11	15,059	4,234	171	138	105	48	22,792	5,933	330	29,055
Increase	50	..	5		3	2	79	..	..	..	..	5	29	..	..	..	..	35	..	..	..	..	..	..	..
Decrease	..	46	..		..	..	..	85	4	931	481	..	..	132	2	2,303	2,528	..	82	89	41	3,143	3,358	..	6,501

No. 7.

STATEMENT showing the Number of Cases in which the punishment of Whipping was inflicted from 1st May 1865 to 30th April 1866 by the Magistrates of Police.

Years.	Theft.				In possession of Property.				Receiving Stolen Goods.				Embezzlement.				Obtaining Money or Goods by false pretences.			
	Punishment under 10 stripes with Rattan.	Punishment under 20 stripes with Rattan.	More than 20 stripes with Rattan.	Other punishment in addition to whipping.	Under 10 stripes with Rattan.	Under 20 stripes with Rattan.	More than 20 stripes with Rattan.	Other punishment in addition to whipping.	Under 10 stripes with Rattan.	Under 20 stripes with Rattan.	More than 20 stripes with Rattan.	Other punishment in addition to whipping	Under 10 stripes with Rattan.	Under 20 stripes with Rattan.	More than 20 stripes with Rattan.	Other punishment in addition to whipping.	Under 10 stripes with Rattan,	Under 20 stripes with Rattan.	More than 20 stripes with Rattan.	Other punishment in addition to whipping.
1865-66..	198	177	48	..	8	2	..	..	..	1	..	..	1	4	..	..	..	..	..	..
1864-65..	61	7	..	..	4	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Increase..	137	170	48	..	4	2	..	..	..	1	..	..	1	4	..	..	..	..	..	..
Decrease..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..

NOTE.—No other punishment was awarded in addition to flogging in the cases alluded to.

STATEMENT of the Number of Fires that broke out on the Island of Bombay from 1st May 1865 to 30th April 1866, showing the particulars of such fires.

No. of Fires.	Date.	Locality.	At what time.	Nature of Property destroyed.	Owner of Property destroyed.	Estimated Damages of Property destroyed.	Cause of Fire.	Remarks.
	1865.					Rs.		
1	May 8th	Mazagon	2½ P. M.	One stable and property ..	Mr. De Lemos	2,500	Accidental.	
2	,, 31st	Duncan Road	2 A. M.	One house and do. ..	Aspundiarjee Manockjee ..	24,000	Ditto.	
3	June 22nd	Cowasjee Patell's Tank Road	10 P. M.	Do. do. ..	Damodher Balajee	1,000	Ditto.	
4	,, 23rd	Sewree	10 P. M.	Stable and property	Hajee Essa Fazila.....	200	Ditto.	
5	July 9th	Shaik Abdoola Dr. Street.	10 P. M.	Part of a house.....	Mahomed Cassum.....	50	Ditto.	
6	,, 23rd	Cursetjee Sooklajee Street.	9 P. M.	Cudjan huts and property.	Mr. Williams & six others.	40	Ditto.	
7	,, 23rd	Kurruck Road	3 P. M.	Three houses stored with cotton, rice, hemp, &c.	Messrs. Campbell, Mitchell & Co. and four others. ..	1,10,000	Ditto.	
8	Aug. 22nd	Bellasis Road	8 P. M.	Hut and quantity of oil ..	Messrs. Rogers & Co.	200	Ditto.	
9	Oct. 2nd	Apollo Bunder	2 P. M.	Four ranges of cudjan huts	Jamsetjee Muncherjee, Essoo Hurry, and Captain Fuller	19,533	Ditto.	
10	,, 14th	Lower Colaba	10 A. M.	Cotton bale.....	Hurjee Zeena	40	Ditto.	
11	,, 15th	Boree Bunder	2 A. M.	Three bales of cotton, &c..	G. I. P. Railway Company	150	Ditto.	
12	,, 23rd	Taboot Gully.....	12 A. M.	One house	Mr. Charles Comyn.....	500	Ditto.	
13	Nov. 13th	Victoria Bunder	9 A. M.	Nine cudjan huts	.....	2,000	Supposed to have been caused by the carelessness of a woman who left some blazed fire in one of the huts.	
14	,, 18th	Waree Bunder	9 P. M.	One cudjan hut	.....	3	Fire is supposed to have been caused by a rat having taken away a lighted wick of a lamp.	

15	„	22nd	Cammatteepoora	9	P. M.	One cudjan hut	.....	75	Accidental.
16	„	19th	Colaba.....	9	P. M.	An engine.....	.....	11	Ditto.
17	„	29th	Chinch Bunder.....	5	P. M.	Three cudjan huts.....	.....	300	Ditto.
18	„	29th	Chuckla.....	5	P. M.	One house	Ismail Habib.....	150	Ditto.
19	Dec.	12th	Chinch Bunder	9	A. M.	One house and property ..	.....	16,000	Ditto.
20	„	18th	Cammatteepoora	11	P. M.	One bullock slightly burnt and articles of clothing .	.....	50	Ditto.
21	„	26th	Colaba.....	9	A. M.	Quantity of cotton.	Colaba Cotton Press.....	10	Ditto.
22	„	29th	Parell Road	9	A. M.	One cudjan hut.....	.....	25	Ditto.
23	„	30th	Chowpatty	1	A. M.	One hut containing hay ..	Ameer Dajee	5,000	Ditto.
24	„	31st	Falkland Road	10	A. M.	Three cudjan huts.....	Ditto	80	Ditto.
25	„	17th	Bhundwy Street	7	A. M.	.....	Shumboo Ramjee	9	Ditto.
		1866.							
26	Jan.	1st	Oomercarry	6	P. M.	One house and property ..	Malloo Canjee	300	Ditto.
27	„	1st	Cazee Street	6	P. M.	Quantity of straw	Ditto	3	Ditto.
28	„	14th	Pydowny	1	P. M.	One house and property ..	Pestonjee Nassarwanjee ..	20,000	Ditto.
29	„	19th	Carnac Bunder.....	10	P. M.	Some cudjan huts and property.	Messrs. Nicol & Co.....	200	Ditto.
30	„	19th	Parell Road	10	P. M.	Bales of cotton and some piece goods.	Ditto	2,00,000	Ditto.
31	„	21st	Bhoyee Wada Road	11	A. M.	Nine cudjan huts and property.	Tooka Bhica	50	Ditto.
32	Feb.	6th	Two Tanks.....	1	A. M.	A portion of cotton and warehouse.	Dongersee Gopal and Hoopia Moorjee.	4,000	Ditto.
33	„	6th	Matoonga	10	P. M.	A quantity of straw	Crustna Naraen.....	70	Ditto.
34	„	6th	Cammatteepoora	12	P. M.	One hut and property	Messrs. Braz & Co.....	1,000	Ditto.
35	„	7th	Cammatteepoora	12	P. M.	A quantity of rags, &c.....	Tyeb Ebrahim	100	Ditto.

No. of Fires.	Date.	Locality.	At what time.	Nature of Property destroyed.	Owner of Property destroyed.	Estimated Damages of Property destroyed.	Cause of Fire.	Remarks.
	1866.					Rs.		
36	Feb. 7th	Abdool Dr. Street.....	11 P. M.	One house and property ..	Abdool Ally	5	Accidental.	
37	,, 15th	Chuckla	3 A. M.	Do. do.	Chand Peroo and three others.	10,300	Ditto.	
38	,, 6th	Lowar Chawl	11 A. M.	Quantity of straw	Balloo Byroo.....	20	Ditto.	
39	,, 19th	Marwarry Bazaar	6 A. M.	Part of a house	Panachund Ootum	20	Ditto.	
40	,, 21st	Churney Wady	6 P. M.	Quantity of hay.....	Jeewajee Manockjee.....	45	Ditto.	
41	,, 22nd	Byculla	5 A. M.	Some cudjan huts	Ditto.	1,000	Ditto.	
42	,, 22nd	Mandvee	9 A. M	Two houses and property ..	.....	80,000	Ditto.	
43	Mar. 1st	Elphinstone Circle	6 A. M.	Property	Messrs. Nicol & Co.....	100	Ditto.	
44	,, 10th	Syed Abdool Ryman Street	5 A. M.	Do.	.....	600	Ditto.	
45	,, 13th	Tardeo	2 A. M,	Seven cotton waggons and a portion of cotton.	B. B. & C. I. Railway Company.	52,000	Ditto.	
46	April 2nd	Parell	11 P. M.	Cudjan huts and property..	Kondoo Cristna.....	200	Ditto.	
47	,, 12th	Breach Candy Road.....	12 P. M.	One house and property ..	Shreenniwas Ramchunder..	20	Ditto.	
48	,, 15th	Naigaum	2 P. M.	Quantity of straw	Gunnoo Shunker	12	Ditto.	
49	,, 19th	Dongree Coolee Street	10 A. M.	Quantity of empty gunny bags and cotton.	.....	500	Ditto.	
50	28th	Modee Khana Street.....	8 A. M.	One house	.....	200	Ditto.	
				Total amount	of Property destroyed	6,42,671		

REVENUE.

LAND REVENUE.

SOUTHERN DIVISION.

The last season proved a bad one for the crops in the Kuladghee and Rutnagherry collectorates, and Government, to relieve the consequent distress, sanctioned in these districts the construction of several minor works of public utility specially to afford employment for the lower class of labourers who have already profitted much by the measure.

2. In the other collectorates of the Southern Division the season, though not generally favourable, except in the Canara collectorate and in parts of the Deccan collectorates bordering the Ghauts, has not been such as to call for any pecuniary aid from Government on behalf of the labouring classes. In the Dharwar collectorate, however, the failure of the crops was serious.

3. Cholera has been prevalent in parts of the Southern Maratha Country. In the other districts, including Canara, the public health has been generally good. In Canara fever has considerably diminished both in extent and virulence, except in a few jungle villages.

4. In the realisable Land revenue of the year there was an increase, contributed by four of the collectorates of the Southern Division, in the following proportions :—

Rutnagherry.....	Rs.	11,930
Dharwar	„	18,043
Sattara	„	1,30,947
Canara	„	87,383
Total....	Rs.	2,48,303

5. In the other collectorates of the Southern Division there was a decrease aggregating Rs. 1,50,466, deducting which from the total amount shown in the preceding paragraph, the result is a net increase of Rs. 97,837.

	Rs.	2,48,303
	,,	1,50,466
Net Increase.....	Rs.	97,837

6. The increase or decrease, however, is in all, except the Rutnagherry, Dharwar, and Canara collectorates, for the most part nominal, being due principally to an alteration made, under the sanction of Government, in the dates for the collection of the revenue instalments.* Where the rubbee or late crops predominate there has been, as in Poona, Ahmednuggur, Kulladghee, and Belgaum, an apparent decrease owing to one-half of the entire rubbee revenue of the year being realisable after the close of the official year; and where the khurreef or early crops † prevail to a large extent, as in Sattara, an apparent increase is the result.

7. In the Rutnagherry collectorate the increase is due to the adoption of a higher commutation rate than in the preceding year for the Government revenue, to the operation of the Summary settlement, and to larger rents having been obtained from khalsa and temporarily attached villages. In Dharwar the increase is due chiefly to increased cultivation, and to the application of the terminable Inam settlement. In Canara the rules formerly in force in surveyed districts were introduced in the year 1864-65, which had the effect of causing a nominal decrease in the revenues of this collectorate for that year, but a nominal increase in the year under report.

The total actual realisations up to 30th April 1866 amounted to Rs. 1,16,87,405.

* Dates for collecting instalments, 10th February and 10th May.
† Dates for collecting instalments, 10th January and 10th March.

8. The realisable Sayer revenue of the year exhibits a decrease in all, the collectorates of the Southern Division except Poona (including the Sholapoor sub-collectorate), Ahmednuggur, and Rutnagherry. The decrease amounted in the aggregate to Rs. 5,48,335 and the increase to Rs. 2,52,695, the result being a net decrease of Rs. 2,95,640. Sayer Revenue.

Decrease.....	Rs.	5,48,335
Increase.....	,,	2,52,695
	Rs.	2,95,640

9. The increase in the Poona collectorate was due chiefly to the Abkaree revenues of the Poona cantonment having for the first time been credited in the books of the Collector. It was also in some measure due to a larger revenue having been derived on account of Licences for the sale of intoxicating drugs and opium; from the sale of stamped papers; from items of Forest revenue, and from items of Judicial receipts. The increase in the Ahmednuggur collectorate was due to a larger sale of stamps, and to an increase in the revenue derived from the Abkaree farms. That in Rutnagherry was also due to these causes, as well as to increased receipts from miscellaneous items of Sayer, and under the head of Law and Justice.

10. In the Kulladghee, Belgaum, and Sattara collectorates the decrease was caused chiefly by the abolition of the Income Tax. In Belgaum and Sattara it was also, in some measure, due to a smaller sale of stamps; and further, as regards Belgaum only, to a decrease in the Abkaree revenues consequent on the transfer of the talookas of Bagulkote, Badamee, and Hoongoond to the Kulladghee collectorate. In Dharwar it was owing chiefly to less having been obtained from miscellaneous items of Sayer revenue, as well as, in part, to the abolition of the Income Tax, and to smaller realisations from the Abkaree farms. In the Canara collectorate it was principally due to a decrease in the revenue derived from Forests, as well as, in a slight degree, to the abolition of the Income Tax.

11. The total actual realisations up to 30th April 1866 amounted to Rs. 33,13,500.

NORTHERN DIVISION.

12. The season was on the whole favourable, although the rain commenced late in all the districts of the Northern Division except Surat and some portions of Kaira. The crops generally yielded well. The heavy showers which fell early in November proved of immense benefit to the wheat and other cereals raised after the monsoon.

13. The Land revenue for collection amounted to Rupees 1,29,50,588, and the total actual realisations up to 30th April 1866 to Rs. 1,23,98,362. These realisations exceed those of the previous year by Rs. 5,58,346.

1865-66..	Rs. 1,23,98,362
1864-65..	„ 1,18,15,016
Increase..	Rs. 5,83,346

14. The increase was contributed by all the collectorates of the Northern Division, except Tanna, in the following proportions :—

Ahmedabad	Rs. 79,010
Kaira	„ 1,17,405
Surat	„ 2,41,400
Khandeish	„ 2,06,116
	Rs. 6,43,931

15. Deducting from the above the decrease in the Tanna collectorate, amounting to Rs. 60,585, the result is, as above shown, a net increase of Rs. 5,83,346.

Rs.	6,43,931
„	60,585
Rs.	5,83,346

16. In the Surat and Khandeish collectorates the increase of revenue has been large, and is attributable in both districts principally to an extension of cultivation, and to the raising of assessment on the introduction of the Revenue Survey.

17. The decrease in Tanna is owing to the disposal of fewer rights of occupancy in waste lands.

18. The Land revenue of the Punch Mahals amounted to about Rs. 2,11,600, being an increase over the realisations of the preceding year of Rs. 1,972, due to extension of cultivation.

1865-66.....	Rs.	2,11,600
1864-65.....	„	2,09,628
Increase.....	Rs.	1,972

19. The Sayer revenue for collection amounted to Rs. 13,38,907, of which the amount actually realised up to the 30th April 1866 was Rs. 13,01,617. These realisations are less than in the preceding year by Rs. 1,895. Sayer Revenue.

1864-65.....	Rs.	13,03,512
1865-66.....	„	13,01,617
	Rs.	1,895

		Increase
Kaira.....	Rs.	4,920
Surat.....	„	15,968
Tanna	„	19,411
	Rs.	40,299
Deduct Decrease.	„	42,194
	Rs.	1,895

20. There was an increase in the collectorates noted in the margin, and a decrease in Ahmedabad and Khandeish aggregating Rs. 42,194.

21. The Sayer revenue of the Punch Mahals amounted to Rs. 39,500, being less than that in the preceding year by Rs. 13,581. The difference is owing to the abolition of the Income Tax, and the transfer of certain cesses to Local Funds.

1864-65.....	Rs.	53,081
1865-66.....	„	39,500
Decrease	Rs.	13,581

22. The Land revenue of the Island of Bombay for 1865-66 amounted to Rs. 77,242, being less than in the previous year by Rs. 151. ISLAND OF BOMBAY.

1864-65.....	Rs.	77,393
1865-66.....	„	77,242
	Rs.	151

23. In the Abkaree revenue there was an increase of Rupees 5,059.

1865-66.....	Rs.	1,93,320
1864-65.....	„	1,88,261
	Rs.	5,059

SIND.

24. The following table exhibits the actual and approximate Land revenue for 1864-65 and 1865-66 :—

Districts.	1864-65.			1865-66.		
	Rs.	a.	p.	Rs.	a.	p.
Kurrachee	6,74,147	14	11	6,37,000	0	0
Hydrabad	10,78,184	13	2	10,30,847	11	0
Shikarpoor	17,69,846	6	9	13,75,204	0	0
Frontier	2,24,919	13	11	1,86,664	0	0
Thur and Parkur	1,22,058	0	0	1,17,490	0	0
Total... Rs.	38,69,157	0	9	33,47,205	11	0

25. From the above it will be seen that there is a decrease of Rs. 5,21,952 compared with the previous year, but, as explained on former occasions, the revenue of the year under report being estimated, can only be entered approximately, and will not admit of a true comparison being made.

26. The cause of the anticipated decrease is generally ascribed to the fluctuating character of the inundation, and to the consequently smaller extent of cultivation. In the Thur and Parkur districts the decrease is attributed to destruction of crops by locusts, to heavy rains, and to frosts.

ALIENATED REVENUE.

Districts under the supervision of the Revenue Commissioner S. D.

27. Of the 16 claims to unadjudicated Inams stated in the preceding year's report as not disposed of only six remain to be settled.

28. The financial result of the summary settlement operations up to the 30th April 1866 is an annual profit to Government of Rs. 2,98,865, or nearly three lakhs of rupees.

29. The terminable Inam settlement mentioned in last year's report (page 50) has been completed, the annual

income to Government from the settlement in its entirety being upwards of Rs. 36,000.

30. The number of claims to alienated revenue disposed of in 1865-66 (exclusive of those dealt with under the summary and terminable Inam settlements) was 5,798 of the aggregate value of Rs. 51,775-6-9, as will be seen below :—

		1865-66.			
		No.	Value.		
	Claims to Villages, Lands, and Umuls.		Rs.	a.	p.
I.	Inam	1	2,719	13	4
II.	Surinjam	11	3,616	8	4
III.	Wuttun	2	2,571	5	9
		14	8,907	11	5
	Claims to Cash, &c.				
I.	Idiana (allowances for village games and amusements on festive occasions, such as Hindoo and Mahomedan holidays) discontinued under the orders of Government..	5,092*	7,259	8	4
II.	Claims adjudicated under the amended Rules of 1842	136	32,399	5	6
III.	Claims disallowed in recently lapsed villages in default of sufficient proof of enjoyment..	489	2,432	13	6
IV.	Claims to compensation for abolished duties..	70	776	0	0
	Total....	5,798	51,775	6	9

31. The aggregate value of the claims to cash allowances remaining to be disposed of on the 30th April 1866 is reported to be Rs. 1,13,200.

32. The following is a resumé of the work performed in 1865-66, the year under report.

Districts under the supervision of the Revenue Commissioner N. D.

As regards cash alienations in the Northern Division, 11,843 allowances of the annual value of Rupees 1,28,484-13-0 were settled as follows :—

	No.	Amount.		
		Rs.	a.	p.
1. Declared permanently continuable	3,068	36,565	9	2
2. Declared hereditarily continuable.....	308	45,163	13	5
3. Declared continuable for more than one life.	2	325	0	0
4. Declared continuable for one life only ..	94	6,297	8	9
5. Transferred to other heads.....	37	188	3	4
6. Redeemed on the part of Government ..	3,739	17,961	0	4½
7. Discontinued or struck off the accounts .	4,595	21,983	9	11½
Total....	11,843	1,28,484	13	0

33. The total sum paid for redeeming the allowances has amounted to Rs. 2,86,850-0-7.

34. Good progress has been made in the settlement of claims to Land Alienations under the provisions of the Summary Settlement Act VII. of 1863 in the collectorates of Gujarat and the Concan.

35. The number of alienations brought under the summary settlement in 1865-66 was 4,579, and the annual revenue realisable under the settlement is reported to be Rs. 14,694. The number remaining to be settled was 1,841, and it is satisfactory to notice that up to the close of the year in five cases only has the summary settlement been declined, and inquiry into title demanded in two cases only.

36. It is expected that the remaining work will be finished by the close of the official year 1866-67.

37. Measures have been set on foot to settle the land fialienations of the Punch Mahals. These districts are reported to be susceptible of much improvement. Emigrants from the neighbouring territories are being invited to settle, and the favourable terms offered to them will, it is hoped, induce many to do so.

INCOME TAX.

The results shown in a report recently submitted by the Income Tax Commission of the amount of Income Tax assessed and collected in the Town and Island of Bombay for the four years 1861-62 to 1864-65 strikingly prove that this is by no means a difficult mode of taxation in this country in Presidency towns.

2. The assessment in the first year amounted to only 9½ lakhs. This sum unquestionably represented but a very small proportion of the total amount legally leviable. By degrees, however, as the agents employed became more accustomed to their duties, and had greater opportunities of arriving at an approximate estimate of the sum to be assessed, the increase became very apparent, until at last, in 1864-65, after all parties in receipt of less than Rs. 500 had been exempted, and after the assessment on the remainder of the community had been reduced from 4 to 3 per cent., the total assessment was, including the sum realised by the Special Commissioner, about 24 lakhs, or considerably more than double that leviable three years previously, when the provisions of the Act were applicable to a far larger class of the community, and when the tax was one-fourth heavier. The unexampled prosperity amongst all classes in Bombay during the year in question contributed, no doubt, very largely to these results, but this cannot be held as the sole cause of the increase, which must, as before stated, be attributed to a considerable extent to the improved means of ascertaining what was really the amount assessable, and to the tax-payers themselves having become better acquainted with the obligations that had been imposed upon them.

SIND.

Compared with last year the receipts have decreased to the extent of Rs. 1,38,823. This is owing to the abolition of the impost from the 1st August 1865. The collections up to that date, and the recoveries of balances on account of past years have amounted to Rs. 48,372.

1864-65	1,87,195
1865-66	48,372
Decrease....	Rs. 1,38,823

CUSTOMS, SALT, AND OPIUM.

BOMBAY.

Customs.

38. The following is a contrasted statement of the revenues of this branch of the department for the years 1864-65 and 1865-66 :—

ITEMS.	REALISATIONS.		Increase.	Decrease.
	1864-65.	1865-66.		
Import Customs.	Rs.	Rs.	Rs.	Rs.
On general trade	66,83,120	64,52,294	..	....
Spirits and Tobacco.				
Special duty on tobacco	1,30,698	1,40,853	..	....
Excise or still head duty on spirits	5,92,398	6,41,693	..	....
Customs on spirits imported by land	263	201	..	....
Miscellaneous items....	86	71	..	....
Total Imports....	74,06,565	72,35,112	..	1,71,453
Exports.				
Sea customs	4,81,894	4,49,290	..	32,604
Land frontier duties	60,084	61,917	1,833	....
Grand Total....	79,48,543	77,46,319	1,833	2,04,057
			Deduct Increase....Rs.	1,833
			Net Decrease....Rs.	2,02,224

39. The above decrease of Rs. 2,02,224 is accounted for as follows :—

Decrease.

Decrease in the amount of customs duty on general merchandise imported and exported by sea (exclusive of tobacco and spirits) caused solely by the general slackness in trade and crisis in the money market	3,66,432	
Decrease in the amount of customs revenue from tobacco owing to less importations from foreign or dutiable and more from free ports this year than the year preceding.	9,291	
Decrease in the amount of customs duty on spirits imported by land	62	
Decrease in miscellaneous items of collection	15	
		3,75,800

Deduct Increase.

Increase in the amount of still head duty on spirits owing to a larger quantity imported from the Oorun and Bhandoop distilleries for consumption in the Town and Island of Bombay this year than during the preceding year.	49,295	
Increase derived under the head of special duty on tobacco owing to larger removals from the tobacco warehouses for home consumption this year than the last year.....	10,155	
Increase in the amount of customs duty realised on spirits imported from Europe; the stock in hand from previous year's supply being small, a larger quantity was imported this year than the last.....	1,12,294	
Increase derived from land frontier duties.	1,832	
		1,73,576
Net Decrease.... Rs.		2,02,224

40. The subjoined statement will show the amount of revenue collected at the Bombay Custom House during the twelve months under review:—

No.	Months.	Realisations in 1864-65.	Realisations in 1865-66.
1	2	3	4
		Rs.	Rs.
1	May	3,55,549	6,03,751
2	June	7,24,743	6,85,451
3	July	6,76,563	6,75,956
4	August	4,62,652	4,71,788
5	September	5,00,782	5,34,221
6	October	5,46,069	4,49,234
7	November	4,91,761	6,85,623
8	December	5,35,792	4,26,336
9	January	5,90,858	5,10,634
10	February	6,30,759	4,97,621
11	March	7,20,480	5,91,465
12	April	6,64,173	6,92,270
	Total of twelve months.... Rs.	69,00,181	68,24,350

Salt.

41. The quantity of salt removed from the pans on payment of full duty in comparison with the preceding year was—

	Indian Maunds.
1864-65	2,921,647
1865-66	3,271,362
Increase in 1865-66	349,715

42. The sums realised under the various heads in this branch of the revenue are as follows:—

	1864-65.	1865-66.
	Rs.	Rs.
Excisive duty on salt removed from the pans	39,47,030	49,59,391
Duty on salt imported by sea	16,624	14,414
Ditto ditto by land	2,77,724	2,89,955
Proprietary right of the Government salt-pans	73,893	65,551
Ground rent from salt-pans	23,530	22,234
Sale proceeds of smuggled salt	1,301	1,772
	43,40,102	53,53,317
		43,40,102
Increase in 1865-66....Rupees		10,13,215

43. The increase is owing partly to the rate of excise being raised from Rs. 1¼ to Rs. 1-8 from the 20th January 1865, and partly to more removals of salt this year than the last year.

Opium.

44. The amount realised on account of pass fees on opium during the year 1865-66 in comparison with the year preceding is—

1864-65	Rs.	2,10,54,000
1865-66	,,	2,12,73,600
Increase....	Rs.	2,19,600

45. The number of chests on which the fees were levied being—

	Chests.
1864-65	35,090
1865-66	36,200
Increase....	1,110

46. The above increase in the number of chests imported needs no special notice. In the year 1862-63 the number was extraordinarily large, being 51,745 chests, and consequently during the year following it, viz. 1863-64, the number came down to 24,733½ chests. However the number of chests in the year under report is very little below the average of the last five years.

Average of the five years ending 1864-65..39,061 chests.
Contrasted with 1865-66 .....36,200 „

Decrease in 1865-66.... . 2,861 „

47. The subjoined table shows the number of chests which passed the Bombay Custom House for export to the China Seas during the last ten years:—

Years.	Number of Chests.
1856-57	28,913½
1857-58	40,405½
1858-59	36,111¾
1859-60	32,506½
1860-61	45,072
1861-62	38,667
1862-63	51,745
1863-64	24,733½
1864-65	35,090
1865-66	36,200

48. Out of the sum of Rs. 2,12,73,600 above shown for 1865-66 the following is the amount to be credited to Indore and Ahmedabad respectively:—

	Chests.	Amount of Duty.
		Rs.
Indore	34,242	2,00,98,800
Ahmedabad	1,958	11,74,800
Total....	36,200	2,12,73,600

49. During the previous year of 1864-65 the respective amounts were—

	Chests.	Amount of Duty.
		Rs.
Indore	34,372	2,06,23,200
Ahmedabad	718	4,30,800
Total....	35,090	2,10,54,000

50. The aggregate realisations in the department of Customs, Salt, and Opium during the years 1864-65 and 1865-66, including all the miscellaneous items noted in the margin, which have not been brought within the totals given in the preceding paragraphs, stand thus—

Port funds.
Measuring fees.
Registry fees.
Wharfage fees.
Warehouse rent.
Interest on overdue opium hoondees.
Crane collections.
Hard fees.
Ganza licence fees.
Strait light dues.
Sundry petty items.

	1864-65.	1865-66.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Customs	85,44,925	83,14,461	....	2,30,464
Salt	43,40,102	53,53,586	10,13,484	....
Opium	2,10,73,264	2,14,54,940	3,81,676	....
Total....	3,39,58,291	3,51,22,987	13,95,160	2,30,464
		Deduct Decrease.... Rs.	2,30,464	
		Net increase in favour of 1865-66.... Rs.	11,64,696	

51. During the year 1865-66 the following Acts in connection with the Customs Department were passed by the Legislative Council of India, and were respectively brought into operation from the dates noted against each :—

Act XXV. of 1865.—Passed by the Governor General of India in Council, to amend the law relating to the duties of Customs on goods imported and exported by sea. — Came into operation from 14th July 1865.

Act XVIII. of 1866.—Passed by the Governor General of India in Council, to alter and to reduce the Customs duty on the export of saltpetre. — Do. do. 24th March 1866.

52. The year under review has been one of general depression to trade and commerce, the effects of which were more particularly felt in Bombay during the latter part of the year. The sudden termination of the American war, followed by a severe monetary crisis, affected many mercantile firms in Bombay, and thus caused them to limit their orders for the importation of goods. This, as stated above, did not much affect the Customs revenue till towards the close of the official year 1865-66, but will more seriously affect the revenue of the current year of 1866-67.

ADEN.

Customs.

53. The subjoined table exhibits the number of vessels that visited the port of Aden during the past year as compared with 1864-65 :—

	1864-65.		1865-66.		Increase.	Decrease.
	No.	Tonnage.	No.	Tonnage.		
Steamers	165	189,745	210	209,475	45	....
Ships	63	51,036	99	79,362	36	....
Country Crafts	745	27,013	819	28,395	74	....

54. The following statement shows the external trade of Aden contrasted with that of the previous year :—

Classification of Goods.	Imports.			Exports.		
	Value.	Increase.	Decrease.	Value.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Apparel	17,327	897	....	6,185	544	....
Coal	25,23,314	10,52,732	....	....	....	3,115
Coffee	1,15,257	1,00,729	....	5,01,740	1,93,451	....
Cotton	87,058	....	54,516	23,690	....	2,905
Cotton piece goods	20,82,178	8,61,728	....	15,48,485	3,74,088	....
Drugs	11,689	2,672	....	4,198	....	9,925
Dyes	11,422	4,432	....	25,233	....	26,797
Feathers	26,733	....	35,510	67,530	....	44,556
Fishmaws	....	....	....	....	....	....
Fruits	1,26,668	77,378	....	51,687	38,734	....
Grain	6,86,145	2,62,986	....	2,24,644	49,915	....
Gums and Resins	42,809	....	4,015	1,15,098	13,229	....
Hides and Skins	43,357	17,526	....	87,490	15,273	....
Ivory	2,10,992	....	6,725	1,48,374	....	1,62,436
Live stock	2,15,383	56.811	....	49,028	12,128	....
Malt liquor	15,323	9,704	....	84	84	....
Mats, &c.	3,311	....	744	1,186	109	....
Metals	51,318	6,226	....	23,078	9,873	....
Manufactured do.	12,544	12,344	....	175	120	....
Mother-of-pearl shells	270	258	....	15	....	665
Oils	20,235	....	3,482	10,307	9,139	....
Oilman's stores	3,316	....	1,076	60	....	15
Paints and Colours	3,454	376	....	1,090	680	....
Pearls	2,04,925	71,725	....	1,36,525	....	1,32,302
Provisions	87,415	23,887	....	92,080	50,694	....
Seeds	55,658	18,076	....	12,205	4,395	....
Silk	30	....	15,800	1,050	1,050	....
Silk piece goods	29,961	....	52,224	10,680	....	1,550
Spices	54,379	....	52,939	20,792	....	5,934
Spirits	17,414	11,024	....	693	381	....
Sugar	1,35,567	86,414	....	74,213	62,975	....
Tea	3,001	531	....	....	....	144
Tobacco	3,44,363	....	32,613	1,33,034	....	1,359
Tortoise shells	50	....	250	1,200	1,000	....
Wax	100	....	....	11,776	....	2,834
Wines	13,870	12,150	....	100	....	....
Woods	....	....	....	....	....	....
Sundries	1,92,510	58,817	....	90,578	34,597	....
Total Merchandise	74,49,346	27,49,423	2,59,894	34,74,303	8,72,459	3,94,572
Total Treasure	21,07,905	3,95,313	....	18,36,694	1,89,695	....
Grand Total .... Rs.	95,57,251	31,44,736	2,59,894	53,10,997	10,62,154	3,94,572

55. The trade returns show again a steady, and this year considerable increase; the total exports and imports amount now to Rs. 2,06,15,453 against Rs. 1,68,56,666 of last year, showing an increase of Rs. 37,58.787. There is a decrease of Rs. 2,49,684 in imports by land caused by the deficiency in grain, principally brought in from the interior, owing to the famine which existed throughout Arabia Felix and Yemen.

56. Deducting, however, from the total general trade the value of coal, which is not an article of any commercial use at Aden, but used solely for the supply of fuel to the steamers, the above increase is reduced to Rs. 27,09,205, as will be seen from the following statement:—

1864-65	Rs.	1,53,82,934
1865-66	,,	1,80,92,139
Increase..	Rs.	27,09,205

SIND.

Customs.

57. From the following tabulated statement it will be seen that the value of the whole trade of the Sea Customs Department has decreased to the extent of Rs. 43,23,705:—

	Imports.	Exports.
	Rs.	Rs.
1864-65	2,31,67,000	2,92,80,150
1865-66	2,01,95,509	2,79,27,936
Decrease .....Rs.	29,71,491	13,52,214
	29,71,491+13,52,214=43,23,705	

58. Two-thirds of this decrease is attributable to the fact of cotton exported having been valued at a lower rate than

that exported in 1864-65. The treasure imported has also been less by Rs. 28,22,461.

59. This decrease, however, must not be taken as a sign of a falling off in the external trade of the province. On the contrary in cotton alone the trade has increased. The quantity exported is in excess of that of the previous year by 44,00,802, and in direct shipments to the United Kingdom there is an increase of 40 per cent. over the previous year. The trade in wool, too, shows improvement, inasmuch as the exports in the year under report exceed those in 1864-65 by 10,676 cwts.

STATEMENT

OF

IMPORTS AND EXPORTS

IMPORTS.

The following is a summary of Increase and Decrease in the principal

	United Kingdom.			France.	Persian Gulf.		Sonmeanee and Mekran.		Mauritius.
	Coal, Metals, Spirits, Wine, &c.	Railway Materials, Naval Stores.	Cotton goods, Machinery, &c.	Wines and Spirits, &c.	Wool, Fruits, Treasure, &c.	Grain, Precious Stones, and Dyes.	Ghee and Wool.	Seeds.	Jagree, Sugarcane, &c.
Increase	6,99,524	5,48,223	....	6,300	2,04,370	....	46,027	....	4,903
Decrease	....	....	4,94,383	....	....	60,318	....	32,454	....

EXPORTS.

The value of the Export trade has decreased during the past year, as shown

1864-65.....Rs. 2,92,80,150
1865-66..... „ 2,79,27,936

Total ..Rs. 13,52,214

It is satisfactory, however, to observe that the trade and Wool to the extent of Rs. 15,70,628.

	United Kingdom.		Bombay.		France.	Mauritius.		Calcutta.		Persian Gulf.	
	Cotton, Seeds, Wool, &c.	Saltpetre, Naval Stores.	Grain, Fruits, Seeds, Silk, Treasure, &c.	Cotton, Wool, Horses, Stones, Jewellery, Gunnies, Wines, &c.	Cotton, Seeds, Saltpetre, &c.	Grain, &c.	Oil and other Provisions.	Cutlery.	Salt, Naval Stores, &c.	Cotton goods, Drugs, Sugar, &c.	Grain, Dyes, Treasure, &c.
Increase.	15,70,628	....	12,48,178	....	....	6,41,129	....	1,125	....	46,564	....
Decrease.	....	34,334	....	14,36,648	9,88,609	....	2,338	....	7,184	....	89,604

Imports, and the Ports whence they have been shipped :—

Bombay.				Cutch.		Calcutta.	Malabar.	British Gujarat.		Africa.
Arms and Ammunition, Cotton, Wine, &c.	Silk, Sugar, Naval Stores, Timber, &c.	Apparel, Soffits, Metals, Woollen goods, Spices, Fruits, &c.	Coffee, Treasure, Earthenware, Grain, Silk, Jewellery, Precious Stones.	Cotton goods.	Treasure, Seeds, Gunnies.	Gunnies, Rice, Sugar.	Timber, Fruits, Spices, Coffee, and Naval Stores.	Tobacco, Grain, &c.	Treasure, Timber, Seeds, &c.	Cocoanuts, Ivory, Spices, &c.
19,00,520	4 38,500	....	....	3,537	....	....	....	5,770	....	6,692
....	....	15,43,030	28,51,169	....	5,50,742	7,53,467	64,782	....	62,026	....

in the margin, to the extent of Rs. 13,52,214 as compared with the preceding year. with the United Kingdom shows a marked increase in the export of Seeds, Cotton,

Goa.		Cutch.		Ceylon.	Muscat.		Australia.	Africa.	Madras.	Aden.	Malabar.		British Gujarat.	
Other articles.	Ghee.	Jagree, Cotton goods, Dyes, Timber, &c.	Grain, Seeds, Treasure, &c.	Sheep.	Cotton goods, Oil, &c.	Grain, Fruits, &c.	Camels, &c.	Fruits, Grain, &c.	Grain, Fruits, &c.	Grain, Wine, Spirits, &c.	Treasure.	Horses, &c.	Jagree and Fruits.	Grain, Cotton, Ghee, Seeds, Fruits, Cotton goods, &c.
518	..	,99,650	....	350	24,735	....	31,152	1,475	780	....	2,000	....	77,789	....
..	1,315	....	19,14,957	..	....	24,223	....	..	..	19,021	....	8,269	....	8,20,565

60. The Customs revenue for the year amounts to Rs. 3,67,747-2-2, being an increase of Rs. 22,298-3-10 over last year.

61. Deducting Drawbacks and Refunds, the actual net revenue of the two years is as follows:—

1865-66.....	Rs.	3,40,544	3	11
1864-65.....	„	3,40,106	0	10
Increase in 1865-66..	Rs.	438	3	1

62. In Imports there is a clear increase of Rs. 28,270-13-3, and this would have been still larger had not the duty on steel rails been reduced from 7½ to 1 per cent.

63. In Exports there is a decrease of Rs. 6,827-11-2.

Salt.

64. This source of revenue also shows a decrease of Rs. 10,968. It is owing to the non-exportation of salt to other ports, and to increased production in the districts of Upper Sind. These tended to keep the prices low and to depress the trade. The causes for the non-exportation of this staple have been separately reported on and need not be recapitulated here. The remarks of the Chamber of Commerce on the subject are worthy of consideration.

1864-65.....	Rs.	1,07,126
1865-66.....	„	96,158
Decrease....	Rs.	10,968

Opium.

65. There is an increase of Rs. 3,003. This favourable result is due to the approved arrangements made by Captain Tyrwhitt for procuring, departmentally, opium of a superior quality direct from Jeysulmere.

1864-65.....	Rs.	85,688
1865-66.....	„	88,691
Increase.....	Rs.	3,003

FINANCE

The official year opened with a balance of Rs. 2,31,46,955 and closed with one of Rs. 3,82,12,911. The latter balance was distributed as follows :—

1,42,96,519	in the General Treasury.
1,42,94,213	in the Revenue Treasuries of the Mofussil
6,99,473	in the General and Political Treasuries.
10,93,058	in the Military Treasury.
3,09,013	in the Public Works Treasury.
75,20,635	in the Mint.
Rs. 3,82,12,911	Total.

2. The increase in the balance of the General Treasury is attributable principally to the large assistance obtained from Calcutta and other Presidencies and Provinces during a run upon the Currency Department in the month of December 1865, and to the transfer of the balance belonging to the several Railway Companies from private Banks to the General Treasury. Large withdrawals were also made from the Revenue Treasuries, and the drawings of the Secretary of State were fifty lakhs less than the actual of the previous year.

3. The actual Receipts and Disbursements for the Presidency in 1864-65, with the estimated and actual Receipts and Disbursements for 1865-66, are thus exhibited by the Accountant General :—

	Actuals 1864-65.	Estimated 1865-66.	Actuals 1865-66.
	Rs.	Rs.	Rs.
Revenue	8,83,31,590	8,25,95,560	8,81,65,857
Charges	3,56,62,257	3,68,21,914	3,70,13,372
Surplus ..... Rs.	5,26,69,333	4,57,73,646	5,11,52,485

And show that in 1865-66 there was, as compared with the previous year, a decrease in actual Receipts amounting to Rs. 1,65,733, and an increase of Rs. 13,51,115 in Charges.

4. Subjoined is a statement contrasting the Receipts and Disbursements of the Bombay Presidency, including those of the General and Political Treasuries, for 1864-65 and 1865-66 :—

STATEMENT

OF

RECEIPTS AND EXPENDITURE.

STATEMENT of RECEIPTS *and* EXPENDITURE

	RECEIPTS.	Actual for 1864-65.	Regular Estimate for 1865-66.	Actual for 1865-66.
		Rs.	Rs.	Rs.
	Cash Balance.. .	1,84,12,639	2,17,42,146	2,17,41,146
I.	Land Revenue	3,56,67,921	3,49,26,000	3,55,50,631
II.	Tributes and Contributions from Native States	8,90,550	9,00,000	8,78,560
III.	Forests	10,81,907	15,04,000	10,07,611
IV.	Abkaree (Excise)	36,73,231	36,73,000	38,50,126
V.	Income Tax	31,85,209	25,96,000	27,52,468
VI.	Customs	79,18,905	80,13,000	76,12,107
VII.	Salt	44,40,679	45,60,000	54,29,012
VIII.	Opium	2,10,59,577	1,66,38,000	2,12,80,255
IX.	Stamps	57,30,098	50,00,000	48,92,848
X.	Mint	14,67,160	17,52,000	21,08,296
XI.	Post Office	....	....	....
XII.	Telegraphs	....	....	....
XIII.	Law and Justice	7,74,158	10,36,000	11,48,880
XIV.	Police	1,52,174	1,50,000	1,01,198
XV.	Marine	13,04,567	8,17,250	8,83,786
XVI	Education	99,566	89,210	98,308
XVII.	Interest	3,37,564	2,75,600	1,06,913
XVIII.	Miscellaneous	5,48,324	6,65,500	4,64,858
	Total....	8,83,31,590	8,25,95,560	8,81,65,857
	Public Debt.			
	Local Loans	2,000	....	....
	Service Funds	28,30,724	22,32,000	28,74,490
	Local do.	74,58,774	44,53,540	51,50,860
	Deposit	1,12,79,003	48,02,100	75,34,175
	Advances repayable	6,79,451	7,78,700	....
	Local Remittances.			
	Cash remittances	1,65,189	....	5,04,181
	Bills	....	....	....
	Military.....	....	....	....
	Public Works	....	76,84,400	92,67,941
	Total....	2,24,15,141	1,99,50,740	2,53,31,647
	Adjusted Receipts on account of other Governments	4,617	....	....
	Carried forward.... Rs.	12,91,63,987	12,42,88,446	13,52,38,650

for the years 1864-65 *and* 1865-66.

	EXPENDITURE.	Actual for 1864-65.	Regular Estimate for 1865-66.	Actual for 1865-66.
		Rs.	Rs.	Rs.
1	Interest on funded and unfunded Debt	....	....	....
2	Interest on Service Funds and other accounts	1,49,190	11,10,070	9,96,758
3	Allowances, Refunds, & Drawback	8,63,311	9,66,100	8,39,321
4	Land Revenue	34,06,868	35,65,210	36,01,813
5	Forests	5,27,714	9,45,400	7,75,053
6	Abkaree (Excise)	1,83,058	3,26,700	4,25,955
7	Income Tax	1,20,599	61,300	65,853
8	Customs	6,79,959	7,83,020	8,54,882
9	Salt	3,66,177	3,65,620	3,17,187
10	Opium	30,663	36,464	32,578
11	Stamps	2,62,231	1,82,340	1,83,551
12	Mint	7,05,644	6,67,790	7,56,541
13	Post Office	....	....	....
14	Telegraphs	....	....	....
15	Allowances to District and Village Officers	38,24,306	35,78,370	34,97,183
16	Administration and Public Departments	15,14,443	15,94,050	15,66,002
17	Law and Justice	36,81,978	43,80,670	43,72,820
18	Police	39,17,860	37,44,110	38,32,981
19	Marine	26,09,188	19,14,370	22,74,336
20	Education, Science and Art	8,52,373	9,72,330	9,90,592
21	Ecclesiastical	2,94,386	3,48,980	3,40,475
22	Medical Services	5,35,607	6,72,560	6,55,091
23	Stationery and Printing	1,62,019	2,28,070	2,78,458
24	Political Agencies and other Foreign Services	7,88,750	7,95,550	8,78,314
25	Allowances and Assignments under Treaties and Engagements.	72,00,590	75,75,910	73,51,346
26	Miscellaneous	4,98,783	4,76,350	5,61,564
27	Superannuation—Retired and Compassionate allowances	24,86,560	15,30,580	15,64,718
	Total	3,56,62,257	3,68,21,914	3,70,13,372
	Public Debt.			
	Local Loans under Liquidation and Transfer	6,900	....	1,500
	Service Funds	21,30,735	22,10,000	22,79,236
	Local do.	43,01,175	35,86,690	33,37,897
	Deposit	88,54,360	49,76,000	1,08,11,081
	Advances repayable	22,01,079	2,97,900	12,15,361
	Carried forward.... Rs.	1,74,94,249	1,19,70,590	1,76,45,975

STATEMENT

RECEIPTS.	Actual for 1864-65.	Regular Estimate for 1865-66.	Actual for 1865-66.
	Rs.	Rs.	Rs.
Brought over....	12,91,63,987	12,42,88,446	13,52,38,650
Remittances from other Governments.			
India	1,49,01,103	1,16,50,500	1,95,44,780
Madras	68,87,366	68,20,900	56,53,732
North-Western Provinces	47,425	1,78,200	1,76,566
Bengal	67,220	67,200	14,304
Punjaub.....	12,89,311	9,04,300	13,57,800
Central Provinces.....	8,95,365	8,29,300	9,50,534
Hydrabad Assigned Districts ..	20,54,164	15,15,800	12,59,788
British Burmah.....	....	....	20,005
Her Majesty's Imperial Government, London	....	....	26,472
Do. Colonial do. China	2,071	....	245
Do. do. do. Ceylon	2,000	3,08,000	....
Do. do. do. Mauritius..	1,00,000	....	1,00,000
Do. do. do. Victoria....	....	....	....
Do. do. do. Cape of Good Hope....	....	....	....
Account Current, London.			
Railway Receipts	39,32,700	94,86,000	2,16,10,580
Miscellaneous	24,52,646	22,88,000	32,43,250
Postal Department	8,31,917	8,27,800	8,80,132
Electric Telegraph Department..	3,24,460	5,70,600	6,20,596
Total....	3,37,87,148	3,54,46,600	5,54,58,784
Grand Total... Rs.	16,29,51,135	15,97,35,046	19,06,97,434

(*continued*)—

EXPENDITURE.	Actual for 1864-65.	Regular Estimate for 1865-66.	Actual for 1865-66.
	Rs.	Rs.	Rs.
Brought over....	1,74,94,249	1,10,70,590	1,76,45,075
Local Remittances.			
Cash Remittances ..... Bills	3,40,820	4,00,000	....
Military Department, Bombay..	2,22,85,223	2,25,85,000	2,48,04,443
Public Works	1,35,96,230	1,75,00,000	1,76,18,135
Total....	5,37,16,522	5,15,55,590	6,00,67,653
Adjusted charges on account of other Governments	1,24,400	....	....
Remittances to other Governments.			
India	57,70,079	53,68,000	93,64,829
Madras	2,35,082	1,23,200	1,33,638
North-Western Provinces ...	46,913	55,000	75,818
Bengal	35,610	3,800	1,41,563
Punjaub.....	10,44,040	8,00,000	9,05,398
Central Provinces.....	74,592	87,100	1,74,196
Hydrabad Assigned Districts..	10,73,890	6,59,500	9,86,580
British Burmah.....	11,200	1,000	16,894
Her Majesty's Imperial Government, London	3,84,790	3,85,000	7,66,493
Do. Colonial do. China.....	42	....	450
Do. do. do. Mauritius ..	55,169	60,000	38,594
Do. do. do. Victoria	....	....	1,352
Account Current, London.			
Railway Advances.....	1,50,35,616	2,13,29,400	2,21,19,016
Home Bills	2,53,02,953	2,02,36,000	2,03,06,000
Miscellaneous	97,876	6,47,300	10,51,450
Postal Department	13,47,858	12,78,500	13,25,442
Electric Telegraph Department .	11,91,100	10,80,100	8,82,854
Total....	5,17,06,810	5,21,13,900	5,82,90,567
Grand Total....	14,12,09,989	14,04,91,404	15,53,71,592
Balance....	2,17,41,146	1,92,43,642	3,53,25,842
Total.... Rs.	16,29,51,135	15,97,35,046	19,06,97,434

5. The following explanations will account for the differences which exist between the figures in the foregoing statement and those of the past year under such of the heads of service as are more particularly under the administration of the Financial Department.

* III. Forest. Decrease Rs. 4,96,389.

6. The decrease * in Forest revenue is owing to the contractors having failed to supply the collectorates of Canara and Tanna with the quantity of timber expected when preparing the estimate.

V. Income Tax. Increase Rs. 1,56,468.

7. The recoveries on account of Income Tax were more than was anticipated.

XIII. Law and Justice. Increase Rs. 1,12,880.

8. The increase under this head is caused by the receipts on account of Registration fees having exceeded the actuals of last year by Rs. 2,36,000, and an increase in the fees of the Small Cause Courts amounting to about Rs. 56,000.

XIV. Police. Decrease Rs. 48,802.

9. In consequence of the transfer of the Police to the Municipality having been delayed from July 1865 to January 1866 upwards of Rs. 33,000 have to be recovered from that body on account of contributions.

Marine.

10. There is a decrease of Rs. 4,20,781 below the actuals of the previous year under the head which is caused by there being fewer sales of Government vessels and stores in 1865-66 than in 1864-65.

XV. Interest. Decrease Rs. 1,69,687.

11. The deficit under this head is owing to the Interest due by the Municipality on account of the Vehar Water Works not having been paid.

12. No adjustment having been made on account of the exchange on Home bills will explain the cause of the deficiency under this head.

Miscellaneous.
Decrease Rs. 2,00,642.

Charges.

13. The increase over the actual of the previous year under this head is owing to the adjustment for the year 1864-65 having been made in 1865-66, and the difference between the actual and estimated receipts of about one lakh is in consequence of the Interest on Local Funds not having been adjusted in the year under report.

2. Interest on Service Fund and other accounts.
Increase Rs. 8,47,548.

14. The estimated and actual payments for 1865-66 approximate so closely as to make any remarks unnecessary.

4. Land Revenue.

15. The charges under this head are less than the estimate by Rs. 1,70,000, and the decrease is attributable to the same cause as is explained in paragraph 6.

5. Forest.

16. The increase under this head is on account of the quantity of opium supplied to the Abkaree Department being larger than the previous year.

6. Abkaree.
Increase Rs. 2,42,897.

17. In consequence of there being large importations of bullion the Mint establishment were required to work extra hours during the year. Large purchases of coal had to be made at very high prices, several consignments not having arrived in the time expected, which will account for the increase over the estimate and also over the actual for 1864-65.

12. Mint.

17. Law and Justice. Increase Rs. 6,90,842.

18. The increase under this head over the actual of 1864-65 is mainly owing to a larger number of prisoners, and the rise in the price of provisions.

18. Police.

19. There is a slight decrease in the actuals compared with those of 1864-65, which may be accounted for by the transfer of the Police to the Municipality. The increase over the regular estimate is owing to additional establishment having been sanctioned, and an increase in the rate of pay.

19. Marine.

20. The increase in the charges under this head of Rs. 3,59,965 over the regular estimate is caused by the purchase of coal, timber, and stores in excess of the amount estimated.

21. Ecclesiastical.

21. The increase under this head is accounted for by grants having been made to St. John's Church, Colaba, of Rupees 16,000, and to the Mission Church at Manora Point, Kurrachee, of Rs. 6,000. The visitation and travelling allowances are Rs. 12,000 above the charges of last year.

22. Medical.

22. The increase under this head compared with the actual of 1864-65 is principally attributable to the rise in price of grain, and the higher cost of rations to the different Hospital establishments.

23. Printing and Stationery.

23. The increase over the actual of the previous year may be accounted for by the introduction of new forms of accounts, and the frequent alterations which had to be made after printing requiring corrected forms, and also to the charges of the Printing establishment of the Secretariat having been brought to the above head of account.

24. There is an increase of Rs.82,764, which is caused principally by an increase in Durbar charges and contingencies.

24. Political Agencies and other Foreign Service.

25. The decrease under this head may be explained by payments not having been made to the full extent estimated during the year, but which will likely be paid in the year following.

25. Allowances and assignments under Treaties and Engagements.

26. The increase of Rs. 85,000 under this head is on account of charges in connection with the Cotton Gin Factory, Dharwar, and other unforeseen charges, for which sufficient provision was not made. The revised estimate for cotton experiments being Rs. 92,190, and actual disbursements on account of the Gin Factory at Dharwar being Rs. 1,21,490, the budget estimate was Rs. 73,000.

26. Miscellaneous.

27. The decrease under this head, Rs. 9,21,742, is in consequence of the donations on account of service and other funds not having been adjusted for the year 1865-66.

Superannuation, Retired, and Compassionate allowances.

28. The amount of Home Bills drawn by the Secretary of State was less than the usual average; the amount drawn in the previous year being fifty lakhs in excess of the year under review, as stated in paragraph 2, although in the latter part of the year advices were received from Calcutta to the effect that an additional four lakhs monthly would be drawn on Bombay. Aid was received from the following Governments and Administrations to enable this Presidency to meet the above drafts:—

Government of India	1,71,50,000
Government of Madras	56,00,000
Government of Punjaub	12,00,000
Central Provinces	8,00,000
Hydrabad Assigned Districts	12,50,000
Total....Rs.	2,60,00,000

29. The amounts advanced to and received from the three Railway Companies connected with this Presidency and Indus Steam Flotilla and Valley Survey were as follows :—

	Advanced.	Received.
	Rs.	Rs.
Great Indian Peninsula Railway.....	1,51,75,348	1,61,84,818
Bombay, Baroda, and Central India Railway	56,01,067	36,82,670
Punjaub Railway	7,32,355	9,89,864
Indus Steam Flotilla and Valley Survey.	6,10,246	7,53,228
Total....Rs.	2,21,19,016	2,16,10,580

THE MINT.

30. The importation of Bullion into Bombay for the year under review exceeded the imports of the previous year by Rs. 2,62,56,854.

31. The amount coined and paid into the General Treasury was Rs. 7,02,09,000. Mint certificates were issued for Rs. 7,53,04,344. The following table gives the amount

of Mint certificates issued and of the money coined during each of the past five years:—

Years.	Mint Certificates issued.	New Coins paid into the General Treasury.
	Rs.	Rs.
1861-62	4,75,61,200	4,05,92,800
1862-63	7,13,10,600	6,06,56,900
1863-64	6,38,50,000	7,60,40,000
1864-65	4,98,62,600	5,59,48,900
1865-66	7,53,04,344	7,02,09,000

32. The average monthly coinage of the year under riview was Rs. 58,50,750.

PAPER CURRENCY.

33. The following tables show the aggregate value of the Currency Notes put in circulation in Bombay and Kurrachee for each month in the year 1865-66.

34. The fluctuations noticeable in the Bombay table are very striking. The marked increase that took place during the monsoon months of June, July, August, and September is to be attributed to the commercial panic and distrust that prevailed in Bombay during that period, and to the fact of notes being more convenient for hoarding purposes than cash. The sudden decrease that ensued in October was owing to the stimulus given to the cotton trade about that time, and to the introduction of the comparatively new practice of payments by advances which necessitated the transmission of large sums of money up country. From these fluctuations may be deduced the fact that the most perfect feeling of confidence exists in the Presidency town

as to the value of the Government Currency Notes, and that there is every reason to believe that similar confidence will be extended throughout the country if greater facilities are afforded than exist at present for the convertibility of notes into cash.

35. The Kurrachee Circle only commenced operations in July 1865, but looking at the result the experiment may be pronounced to have been successful, as the issue is 25 per cent. in excess of that estimated before the Circle was opened.

STATEMENT of the Value of GOVERNMENT CURRENCY NOTES *put into circulation in* BOMBAY *during* 1865-66.

Last day of the Month of	BOMBAY.	
	Value of Notes in circulation.	Monthly Increase (+) or Decrease (—).
	Rs.	Rs.
April 1865	3,37,00,000	....
May „	3,31,00,000	— 6,00,000
June „	4,07,00,000	+ 76,00,000
July „	4,09,00,000	+ 2,00,000
August „	4,14,50,000	+ 5,50,000
September „	3,93,00,000	— 21,50,000
October „	2,96,00,000	— 97,00,000
November „	2,94,75,000	— 1,25,000
December „	2,60,45,000	— 34,30,000
January 1866	2,91,30,000	+ 30,85,000
February „	2,97,30,000	+ 6,00,000
March „	3,03,55,000	+ 6,25,000
April „	3,12,80,000	+ 9,25,000
Increase since April 1865	....	....
Decrease since April 1865	....	24,20,000
Percentage of Decrease	....	7·181

STATEMENT of the Value of GOVERNMENT CURRENCY NOTES *put into circulation in* KURRACHEE *during* 1865-66.

Last day of the Month of	KURRACHEE.	
	Value of Notes in circulation.	Monthly Increase (+) or Decrease (—).
	Rs.	Rs.
April 1865	None.	....
May „	None.	....
June „	11,56,730	....
July „	15,81,720	+ 4,24,990
August „	19,84,080	+ 4,02,360
September „	21,93,350	+ 2,09,270
October „	22,10,650	+ 17,300
November „	22,72,870	+ 62,220
December „	11,52,400	— 11,20,470
January 1866	11,58,540	+ 6,140
February „	10,87,230	— 71,310
March „	10,99,660	+ 12,430
April „	10,07,370	— 92,290
Increase since June 1865	....	None.
Decrease since June 1865	1,49,360	1,49,360
Percentage of Decrease	....	12·912

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POLITICAL.

The event of greatest interest during the year of report in connection with the political administration of the Presidency was the tour of His Excellency the Governor through the Southern Maratha Country in November and December last. On arival at Kolhapoor His Excellency had an opportunity of congratulating the Raja in having proved himself worthy, after a long probation, to assume the direct government of his territories. Every department of the State was found to be well administered by His Highness in person, and there was every visible mark of justice being properly administered, and of the people being well governed, prosperous, and contented. The Raja has addressed himself to the task of educating in his own palace the sons of the principal officers of his State, while the encouragement given by him to Education has shown itself in the reputation which the English school at his capital has acquired as a preparatory course for higher academical studies. There are 18 Vernacular schools supported by the State, besides a Girls' School and an Infant School at the capital town.

2. At Belgaum His Excellency the Governor held a Durbar for the reception of the Chiefs and Sirdars of the province, and addressed them in Marathi at some length. In the course of his address His Excellency remarked that with one or two notable exceptions, though the province had been under the British Government for more than forty years, none of the Sirdars had ever visited Bombay or Poona, and in expressing to them the pleasure he would have in seeing them at the capital of the Presidency, he pointed out that this might be done by discontinuing the custom of moving about

with large and expensive retinues, which was the great obstacle to their enjoying the pleasures and advantages of travelling.

3. The Political Agent reports that the advice thus tendered to the Sirdars has made a perceptible impression on their minds, and that they are now looking forward to an opportunity of visiting Bombay and Poona, and seeing all that is worthy of attention.

4. The general character of the administration of the Chiefs of the Southern Maratha Country during the year was favourable. There was some progress in Public Works, among which may be mentioned the completion of a metalled road from the town of Sanglee to the Sattara frontier, a distance of six miles, a fine school-house at Meeruj, and two dhurumsalas at Moodhole. Education is being gradually diffuseds among the dependents of the Sirdars, and the financial condition of most of their estates, after years of chronic embarrassment, is marked by well assured prosperity.

KATTYWAR.

5. The inability of the Chiefs of this province to keep in check the bands of outlaws who traversed the country under Waghere leaders, plundering His Highness the Gaekwar's Mahals, became so evident in the early part of the year of report that the Resident at Baroda proposed to Government the formation of a Local Corps, under European officers, for the preservation of order. While this proposal was under consideration the state of Okamundel caused considerable anxiety, and at one time there was a probability of a general outbreak of the inhabitants. An additional Regiment of Native Infantry was in consequence sent into Kattywar, one wing being quartered at Dwarka and the other encamped in the vicinity of the Burda Hills. On the opening of the season the military command of all detachments

was assumed by the Political Agent, Major Keatinge, who devoted himself for several consecutive months in hunting up the outlaws, and in pursuing inquiries regarding the movements of the outlaw bands who have disturbed the province more or less since 1857. The result of these inquiries convinced Major Keatinge that to drive the present outlaws from the country, and to make it difficult for similar bodies to assemble again, it is necessary to strengthen the hands of the Native Chiefs by encouraging them to assert their authority over their Bhyads, who exercise an independent jurisdiction in their own villages.

6. Some important alterations were made during the year in the organisation of the educational establishments in the province. An Inspector of Schools was created, and the Central Educational Committee at Rajkote was divided into four district Committees under the presidency of the Political Assistants. The result of these changes has been most beneficial in the influence which the district Committees are now able to exercise over the Chiefs, who have subscribed more liberally than hitherto for the object of securing vernacular education to their subjects.

7. The vigour and ability of Major Keatinge's administration have been manifested in other ways: by improvements in the postal communication of the province, and by the introduction of agricultural implements of European manufacture, an exhibition of which was held at Rajkote during the year.

8. A cotton-cleaning steam factory was opened at Wudwan during the year, which is interesting as the first undertaking of the sort in the province.

KUTCH.

9. The general results of the administration of Kutch during the year of report were satisfactory. The revenues of

His Highness the Rao and of the Chiefs, which are chiefly derived from sea customs, continued prosperous. The poorer classes, however, suffered from the high prices maintained for grain and other necessaries of life. Notwithstanding the prevailing scarcity, it is gratifying to record that there was almost a total absence of violent crime. Early in December a band of Waghere outlaws, who had been driven out of Kattywar by the vigour of Major Keatinge's operations, landed on the Kutch coast, and plundered a wealthy Durbar village. One of the most noted of the band was subsequently captured in Kutch, and nearly all the others were traced and captured in or near Okamundel.

10. The most gratifying mark of progress in the history of the province during the year was the opening of a Girls' School at Mandavee. The experiment may be considered successful, the average daily attendance, chiefly of the daughters of Brahmins, Bhattias, and Borahs, being from 40 to 45.

11. His Highness the Rao has been elected a member of the Royal Asiatic Society.

REWA KANTA.

12. The Rewa Kanta districts have been perfectly tranquil during the year of report, and there has been a sensible decrease in crime.

13. After the disturbances on the Loonawara and Soanth frontier, alluded to in the report of the previous year, several of the Chiefs whose Sebundee forces were in excess of the requirements of their States were required to reduce them, and to enter into engagements not to increase their forces beyond a fixed strength without the previous sanction of the Political Agent.

14. The young Raja of Barreah, whose principality is under the management of Government, has been removed to Ahmedabad with a view of better securing his education.

15. There is still much ill-feeling between the young Raja of Rajpeepla and his father, the Ex-Raja, who abdicated in 1860, but who still retains the power of the State in his own hands. During a visit to the Raja's capital in May last the Political Agent arranged that the young Raja, who has now attained his majority, should take a share in the administration. Owing, however, to the inimical feelings which have long existed between them it is feared that their differences will soon require the more active interference of Government.

KHANDEISH.

16. The Akranee Pergunna suffered during the year from the excursions of a turbulent freebooter called Ettia Naik from the northern bank of the Nerbudda. Measures were immediately taken to strengthen the police posts in Akranee, and with the co-operation of the Political Agent at Bhopawur this freebooter was eventually captured. With this exception the tranquillity of the districts of the Bheel Chiefs remained undisturbed.

17. The boundary line of the whole of the northern frontier of Khandeish was laid down during the year.

SURAT.

18. The supervision of the Chiefs in the Surat district was transferred during the year of report from the Judge to the Collector of Surat. By this arrangement it is expected that the Chiefs will be brought oftener under the eye of the Agent, whose duties as Collector require him to visit the districts of his charge periodically.

19. The affairs of Dhurrumpoor which gave some trouble in the previous year, owing to the indebtedness of the State and the turbulent conduct of the Raja's Arab Sebundee, were

placed on a satisfactory footing during the year of report through the intervention of Government, by whom a loan of six lakhs of rupees was guaranteed on the understanding that any failure on the part of the Raja to liquidate the amount by regular instalments will result in the temporary sequestration of his territory.

SIND.

26. Although great distress prevailed amongst the hill tribes on the northern boundary of the Upper Sind frontier in consequence of an almost entire absence of rain during the year, only eight thefts, and those of simple cattle-lifting, were brought to notice as committed by people from beyond the frontier. This state of affairs may be principally attributed to the advanced position of the new frontier outposts, which renders raids on any but the most insignificant scale altogether dangerous to attempt. There are therefore hundreds of the Boogtee tribe with their families gaining a livelihood by labouring at canal clearances within the frontier who formerly would have attempted, during a season of dearth, to satisfy their hunger by cattle-lifting along the border.

21. His Highness the Khan of Khelat has been employed during the year in settling the affairs of his country after the confusion of the year 1863-64, and for this purpose he remained during the past cold season at Khelat. An attempt to create disturbances was made in July by the Jam of Beyla, and Nooroodeen, the Chief of the powerful Mingul tribe, but their forces were met by those of His Highness the Khan near Kosdar in Jalawan and totally defeated. Both the Jam and Nooroodeen were captured in the retreat, and have since resided under surveillance at Khelat.

22. The Khan has kept himself and people entirely aloof from the quarrels of the neighbouring country of Afghanistan, and has continued to maintain the most friendly

relations with the British Government, and to act up as far a lies in his power to his treaty engagements.

ADEN.

23. The hostility of the Foodhlee Chief was carried so far during the year of report that in September last he attacked a *Khafilah* on British ground and within gunshot of the fortifications of Aden. Later in the year intelligence was received that the Foodhlees were assembling in force with the avowed object of destroying the crops of the friendly Abdullah tribe and defying the British. It was therefore judged necessary to move a force into the interior for the purpose of chastising the Foodhlee Chief. A suitable and well-equipped force was accordingly prepared, and held ready to move directly it was known the Foodhlees were quitting their own country. A report of this being the case was received on the 20th December, and on the following day the advanced guard, consisting of two guns, the Native Artillery and Native Infantry, accompained by Lieutenant Goodfellow, marched to Shaik Othman to support the Abdullah post there. On the morning of the 22nd the remainder of the force left the Barrier Gate, the whole being under command of Lieutenant Colonel Woolcombe, C.B., R.A., accompanied by the Resident.

24. On reaching Shaikh Othman it was found the enemy, numbering some 1500, really were established on the road to Lahej at Bheer Saeed about 8 miles in advance. After the troops had rested they were marched towards the enemy's camp, which they completely surprised in the afternoon, and in about three-quarters of an hour's fighting utterly overthrew and put the enemy to flight. A few cavalry would have made the blow perfect, and few would have escaped. As it was they did not stop until they had reached their own country, thirty miles off. Though it had been shown by this success that the road could not be held by these robbers with

impunity, it was necessary still further to prove to them that they were tangible in their own country as well. It was also most desirable to obtain some reliable information about the country, of the nature of which the Abdallees even were totally ignorant.

25. After a few days employed in laying in forage and provisions, and obtaining fresh stores from Aden, with an additional 100 men of H. M.'s 109th, with whom Brigadier General Raines, C.B., came and assumed command, the troops entered the Foodhlee country on the 28th December, had a slight skirmish on the 29th near Ahmoodeea, the head-quarters of Ahmed bin Abdoola, proceeded to the capital Ussala, a considerable town, destroyed it, as also the fortified places at Sekran, Alkore, and Ahmoodeea, and re-entered Aden on the 9th January, having spent eleven days in the Foodhlee country, and visited the greater part of it, bringing away seven guns. A very useful compass survey was made by Captain Pym and Lieutenant Jacob. Sooltan Fadhil Mahsim of Lahej, with his brother Sooltan Mahomed and other members of his family, also Syed Alovi of Aden, a man whose attachment to British interests has always been prominently shown, accompanied the force throughout.

Shugra, the port of the Foodhlees, 20 miles N.E. from Ussala, was at first spared in hopes the punishment administered would prove sufficient. But some outrages were attempted by the Foodhlees in February and March, and a small force was therefore taken round by sea. Leaving on the 14th March it reached Shugra on the following morning; the troops were landed that day, and advanced two miles inland the next morning to the new forts, which were destroyed. The force then re-embarked, and all were back in Aden by 8 A.M. of the 17th, thus letting the enemy see they could be approached by sea and land with the greatest ease whenever it was found necessary. One of the chiefs, a nephew of Ahmed bin Abdoola, surrendered at Shugra, and has been in Aden several time

since. He has with his followers withdrawn from his Uncle entirely. Ahmed bin Abdoola and the remainder of the tribe are also anxious to come in, but they have been endeavouring to do so in an indirect manner, as if it was no surrender on his and their part.

26. Recent events have helped greatly to consolidate the good feeling of the Abdallees, and will go far towards improveing their status, and enabling them to recover themselves from the unfortunate condition into which years of disorder had brought them. The other tribes have also seen that the British Government, while forbearing, can and will, when requisite, put forth its power, and that it is better not to provoke its display. For the proper settlement of the country, and certain freedom from insult and annoyance, a troop of horse appears to be indispensably necessary. With them the country would have a fair opportunity of returning to that state of wealth and prosperity which it once undoubtedly enjoyed.

THE PERSIAN GULF.

27. The efforts of the Political Resident in the Persian Gulf were directed in the early part of the year of report towards improving the relations between the Muscat and Wahabee powers. Differences had arisen between them in consequence of the active support given by the Wahabee Ameer to the Sheikh of Rostak, an hereditary chief of Muscat, who sought to throw off his allegiance to the latter State. These differences resulted in a demand on the part of the Wahabee Ameer for an increase of the tribute which the Imaum had paid for many years past to his more powerful neighbour, combined with a threat of invasion in case of non-compliance. In this position of affairs Colonel Pelly, who had visited the Wahabee Ameer at his capital a few months previously, wrote to him, stating his readiness to afford good offices, and enclosed a letter from the Imaum of Muscat, in which the latter

declared himself ready to abide by whatever settlement the Resident might make. To this friendly offer of mediation the Ameer did not respond. On the contrary he sent an agent to Muscat with demands for the payment of three or four times the customary annual tribute, and shortly afterwards the Beni-boo-Ali and Jenubah tribes, under the leadership of a Wahabee lieutenant, invested the Imaum's castle of Soor. On the refusal of the garrison to surrender, siege was laid to the place, when, after a successful resistance of three days, the enemy undermined the walls of the town adjoining the castle, and effected an entry, plundering the entire wealth of the town, the greater portion of which belonged to British Indian subjects. During the assault one British subject was killed, whose remains were denied the rites of burial, and some others were wounded. The castle subsequently surrendered. After suffering much hardship and indignity the British subjects were permitted to leave Soor and proceed to Muscat, where they represented their losses to the Political Agent at 27,000 dollars.

28. These events left no doubt of the aggressive designs of the Wahabees on the Muscat dominions, and combined with recent manifestations of a revival of their fanatical influence in India could not be viewed without concern. Apart from any internal impulse given by the revived spirit of religious fanaticism, there were several obvious causes of this fresh development of Wahabee power. Much was undoubtedly due to the long season of comparative rest in repairing their exhausted energies, since the disappearance of the generation which had experienced the power of the Egyptian Pacha Mahomet Ali, of the late Imaum of Muscat, and of British Naval and Military expeditions. But whatever the cause, there could be no doubt of the evil effects of this revival of Wahabee power, and that these effects would not be confined to the continent of Arabia. There had already been warning

symptoms of a possible reappearance of piracy on the Indian coasts, and there was every year an increased activity of the slave trade carried on between East Africa and Arabia, chiefly by vessels belonging to the Wahabee pirate ports, and their aggressions on the Muscat territories now fairly threatened to injure seriously a power which for several generations past had been the only representative of civilisation and order in Eastern Arabia.

29. It was felt that this was a state of things in which the British Government could not remain passive, more especially as we had Treaty ties with Muscat, and maintained a rapidly increasing trade with the Persian Gulf. The Commodore in the Indian seas was accordingly requested in November last, under instructions from Her Majesty's Government, to proceed to the coast of Arabia, and, in concert with the British Resident, to take such measures, instrumental, they might think likely to promote an arrangement between the Wahabee Chief and the Imaum. In communicating these instructions to the Resident, he was desired to impress on the Sultan of Muscat the necessity of vigorous action on his own part, and to discourage any hope that the British Government would fight his battles for him. Colonel Pelly met the Imaum at Birka early in December, and found that he was fully alive to the necessity of vindicating his authority at Soor, and taking measures for the defence of his inland frontier. At the close of December the Commodore despatched Her Majesty's Ship *Highflyer*, commanded by Captain Pasley, to the Persian Gulf for the purpose of co-operating with the Resident, in accordance with the instructions of the Home Government.

30. Meanwhile events in the Persian Gulf assumed a momentous aspect, arising from the determination of the Muscat Government to proceed to hostilities. The Imaum had entered on preparations for blockading the Wahabee ports of Kateef and Ojain, and after despatching a fleet with this

object under the command of his brother Syud Toorkee, he proceeded to collect his tribes and to equip them for an advance on Bereymee, a strategic point held by the Wahabees.

31. To these warlike preparations the Wahabees were not indifferent. They had a short time before moved a detachment upon the post of Saham, and driven the Banyan residents into the sea, one of whom perished by drowning.

32. On the *Highflyer* joining Colonel Pelly, he represented to her Commander that the only method by which a ship of war could aid the Imaum in his present crisis was by blockading the Wahabee ports until the Wahabee Ameer came to terms. Before, however, commencing any operation Colonel Pelly proposed to address the Ameer, allowing him due time to apologise and make reparation for the injuries inflicted on British subjects. As the orders of the *Highflyer* limited her stay in the Persian Gulf, and Commander Pasley had no reason to suppose that any other vessel of war was coming to take his place, he considered it inadvisable to undertake a blockade which could not be enforced after the departure of the *Highflyer*, and proposed to assist in confiscating the shipping in the Wahabee port of Khateef, and to destroy the Wahabee forts, if the Ameer failed to make reparation within the time (eighteen days) to be allowed him for the purpose. To this proposal Colonel Pelly acceded, and being unable, owing to the critical state of affairs in Muscat, to accompany Commander Pasley, he deputed his native agent, the only functionary at hand whose local knowledge and experience could be relied on.

33. The *Highflyer* visited Bahrein in the neighbourhood of Khateef on the 13th January, and having left a letter for transmission to the Wahabee Chief, proceeded to cruize along the pirate coast. In the course of this cruize the boats of the *Highflyer* destroyed a tower which dominated that part

of the Arab coast. Returning to Khateef on the 30th and finding that there was no answer from the Wahabee Chief, Captain Pasley sent his boats off to bring out all the Wahabee vessels that might be in the harbour, and to destroy a small fort called the Burj Bullif which commanded the entrance of the port. This service was satisfactorily accomplished. An attempt was next made to destroy the neighbouring fort of Demaum. It being past high-water the boats could not approach it, when their crews gallantly waded on shore and succeeded in effecting an entrance to the principal tower; but finding the garrison much stronger than was anticipated they were compelled to retreat with the loss of three men killed, and two officers and three men wounded. On the following day the fort of Demaum was shelled, and some considerable damage done to the interior and its defenders.

34. Operations were next directed by the *Highflyer* against the pirate port of Soor, the inhabitants of which, chiefly of the Jenuba tribe, were implicated in the recent plunder and murder of our subjects. The Jenuba tribe had long been notorious among our Naval officers as the most cruel and unscrupulous slavers and pirates, and they were among the Arab slave dealers who had conspired in 1861 to assassinate the British Agent at Zanzibar for his anti-slavery proceedings. They had treated the demands made on them by Colonel Pelly for restitution of the 'property plundered by them from our subjects with total disregard.' Under all these circumstances Colonel Pelly judged that a severe example should be made of the Jenuba, and after due warning to all non-combatants, the *Highflyer* opened fire on their forts, utterly ruining them. The *Highflyer's* boats then went up the Sooree creeks and destroyed or confiscated all the craft of the tribe.

35. Captain Pasley returned to Bombay on the 18th February for further instructions, while Colonel Pelly re-

mained at Mussendom in hourly expectation of intelligence that the Sultan had taken Bereymee, when a boat arrived from Muscat bringing letters from the local agent, and from Syud Saulem, the eldest son of the Imaum, informing him that the Imaum was dead, and that Syud Saulem had succeeded. Reports from five or six different and independent sources subsequently reached Colonel Pelly agreeing that the Imaum had been shot while sleeping in the fort of Sohar, that his son Saulem then imprisoned Syud Toorkee and the confidential servant of his late father, and had then disbanded the tribes and ridden off to Muscat.

36. Colonel Pelly proceeded to Sohar in the Steamer *Berenice,* and arrived in time to save the life of Syud Toorkee, whose liberation he effected. The information elicited by Colonel Pelly's inquiries at Sohar corroborated the reports which already reached him regarding the death of the Imaum. Proceeding to Muscat Colonel Pelly found the British Indian subjects there in a panic caused by the fanatical proceedings of Syud Saulem's advisers. He received the Christian families on board the *Berenice,* and advised the Indian subjects to remove their specie and jewellery and embark on board their own Buglas. Colonel Pelly declined to acknowledge Syud Saulem in any way, and while anxiously awaiting the appearance of a man-of-war, he received credible intelligence of a plot having been discussed by the faction in power for attacking the *Berenice.* This vessel being unarmed, and apprehending that a collision on board would be followed by a general massacre of Indian subjects on shore, he judged it expedient to sail for Mussendom, after taking precautions to prevent the Mail Steamer entering Muscat.

37. Syud Saulem subsequently sent a deputation to Bombay with a letter soliciting a renewal of the friendly relations which had for so long subsisted between the Muscat State and the British Government. The question of his recognition as ruler of Muscat is under consideration.

38. It is satisfactory to record in conclusion that the Wahabee government have given assurances of their desire to cultivate the friendship of the British Government, to prevent the molestation of British subjects residing in their territory, and to abstain from encroachments on the Muscat dominions.

39. Fysul, the aged Ameer of the Wahabees, died in March last, and has been succeeded by his son Abdulla ben Fysul, who has many difficulties to contend with in consolidating his authority within his own frontiers. There is every probability therefore of the Arab tribes of the Persian Gulf remaining at peace for some time to come.

PUBLIC WORKS.

MILITARY.—ARMY.

Fortifications.

Oyster Rock Battery.

1. *Bombay.*—This battery is in the same state as it was on the 1st May 1865, all work thereon being suspended pending the decision of Government as to armament and superstructure.

Middle Ground Battery.

2. No operations of special interest have been carried out this year; it is proposed to complete next season filling in the foundation up to half tide.

Cross Island Battery.

3. A shell-filling room, serjeants' quarters, and cookhouse have been half finished.

Colaba Point Battery.

4. An additional epaulment, containing a magazine and shell-filling room, has been sanctioned for this battery. The building is completed up to the springing line of the arches, and centering fixed. A palisade to go round the battery has also been made, but is not yet fixed.

Serjeants' quarters, cookhouse, and lascars' quarters have also been sanctioned. The first is complete up to the

plinth, the second not commenced, and the third is complete up to the level of the windows.

Saddle-Back Barges.

5. The materials for 12 iron saddle-back barges were received from England in October and November, and their construction commenced in the Dockyard, the progress at first being very slow, on account of want of slip accommodation. Barge No. 1 was launched at 10 A.M. on the morning of the 29th March, and sank at 9 P.M. of the same day. She has been lifted and placed upon the stocks. Four other barges have rapidly progressed in the last two months, and will shortly be ready for launching.

Pau Pir Quarries.

6. Are in good working order, and supply stone and moorum for the reclamation at Mazagon for new workshops.

New Workshops.

7. The work of removing material, &c. from the side of the old workshops to the Gun Cap Manufactory is being carried out. At the new workshops' ground a pier has been constructed of dry stone 263 feet in length, 27 feet broad, and 12½ feet in height. A dry stone retaining-wall, in continuation of the pier line, has been built 300 × 8 × 10 feet. The boat slip is now 120 × 88 × 3½ feet, and the cross wall between the pier and the slip is 140 × 8 × 11 feet. Ground has been reclaimed equal in area to 23,340 square feet, with a depth of about 11 feet; 1,300 running feet of tramway have been laid down. The enclosure wall on the land side, 341 × 4 × 6 feet, has been constructed as a temporary measure from dressed stones in store removed from the old workshops.

The expenditure on the Bombay defences for the year has been as follows:—

ORIGINAL WORKS.	Rupees.	Rupees.
Oyster Rock Battery	86,720	
Middle Ground Battery	6,43,520	
Cross Island Battery	300	
Do. do. shell-filling room, serjeants' quarters, and cookroom	3,720	
Colaba Point Battery	280	
Colaba Point Battery shell-filling room, magazine in an epaulment, and a palisade all round the battery	13,630	
Do. do. serjeants' quarters, with cookroom and twelve lascars' quarters	2,510	
New workshops	67,570	
Removing the arched parapet of the Flanking Battery over the Custom House Bunder	700	
Putting together and fitting up the twelve saddle-back barges	31,000	8,49,950
REPAIRS. Total Expenditure	.....	400
TOOLS and PLANT. Total Expenditure	.....	45,670
Expenditure in 1865-66	.....	8,96,020

ALLOTMENTS FOR 1865-66.	Rupees.	Rupees.
Grant for the Harbour Defence Works, Public Works Budget, Part II. Item 1	8,50,000	
Further grant for ditto—Government Resolution No. $\frac{425 \text{ MW}}{2396}$ of 20th November 1865	2,00,000	
For removing the arched parapet of the Flanking Battery, Town Custom House Bunder, Government Resolution No. $\frac{1525 \text{ CW}}{2510}$ of 11th December 1865	970	
Grant for repairs	600	
For tools, plant, and stores, Public Works Budget, Part V.	64,500	
For putting together the 12 saddle-back barges from England. Government Resolution No. $\frac{160 \text{ MW}}{696}$ of 19th April 1866	45,000	
Allotments for 1865-66		11,61,070

8. *Aden.*—Work mentioned in last report has progressed well this year, total running feet of scarp of which the blasting has been completed 1,820, of which 1,170 feet has been done this year.

Scarping the Southern Range.

Expended in 1865-66 .....Rs. 3,160
Sanctioned for 1865-66..... „ 8,000

Additional Magazine and Shell Room, Ras Tarshyne Battery.

9. Work mentioned in last report has been completed.

Expended in 1865-66 .....Rs. 2,130
Sanctioned for 1865-66 ..... „ 2,130

Inserting Pivots for Guns, Ras Tarshyne Battery.

10. Pivots for eight guns inserted, commenced and completed this official year.

Expended in 1865-66 .....Rs. 2,240
Sanctioned for 1865-66 ..... „ 2,370

Plastering Ramparts and Parapets across the Isthmus.

11. Work mentioned in previous report has been completed.

Work done this year 35,000 square feet plastering.
Expended in 1865-66 .....Rs. 7,000
Sanctioned for 1865-66..... „ 7,000

Plastering scarp walls between Barrier Gate and Main Pass Gate.

12. Work commenced and completed this official year.

Expended in 1865-66.....Rs. 2,600
Sanctioned for 1865-66..... „ 2,600

Repairing Pier of Obstruction.

13. Commenced and completed this official year.

Expended in 1865-66..... ....Rs. 4,550
Sanctioned for 1865-66 ..... „ 4,580

CANTONMENTS.

Draining the Isthmus of rain-water.

14. *Aden.*—Completed. 3,967 running feet of drain carried out this year.

Expended in 1865-66 ..... Rs 4,900
Sanctioned for 1865-66..... ,, 3,970

Protecting plastered roofs Isthmus Reservoirs.

15. Commenced and completed this year.

Expended in 1865-66 .....Rs. 1,700
Sanctioned for 1865-66..... ,, 1,750

16. *Deesa.*—8,731 feet in length of a road 20 feet broad has been laid out, made, and drained; 3,996 feet have been laid out and made, drainage incomplete. An old road has been repaired and drained. One small culvert 7 feet span, and 5 feet in height, into spring of arch, and 6 drains, single and double barrel, of different diameters, have been constructed.

New Roads in the Cantonments.

Sanctioned allotment in 1865-66.
Amount in Budget reduced. Rs. 5,030
Additional grant..... ,, 6,000
Rs. 11,030
Expended in 1865-66.. ,, 11,029

Constructing a metalled Road connecting the Sunkersett Road with the Poona Camp Roads.

17. *Poona and Kirkee.*—This road, which is 1,450 feet in length, has been completed.

Allotment for 1865-66 .....Rs. 2,102
Expended in 1865-66 ..... ,, 500

18. *Poona District.*—A moorumed road 3,570′ × 17′ has been constructed; one slab drain 2′ × 2′ has been built; and a road from the lines to the officers' quarters, about 620′ × 12′, has been repaired with a layer of moorum 3″ deep.

Constructing a Road to the 3rd Light Cavalry Lines.

Allotment for 1865-66 .....Rs. 1,523
Expended in 1865-66..... ,, 817

Constructing a moorum pathway 10 feet in width from the road leading to the village of Ghorepooree to the Rifle Butt of H. M.'s 4th King's Own Regiment.

19. About one-third of the whole length of this road has been completed.

Allotment for 1865-66.....Rs. 1,076
Expended in 1865-66..... ,, 407

Metalling Roads in the Poona Cantonment.

20. 53,830 cubic feet of metal have been prepared.

Allotment for 1865-66.....Rs. 10,978
Expended in 1865-66..... ,, 2,432

Working Aqueduct, Wells, and Steam Pumping Machine, &c.

21. The engine was set to work in January 1866, but owing to some defect in the machinery it could not be continued, and the bullock pumps were therefore obliged to be again brought into use in order to supply water to the cantonment.

Allotment for 1865-66 .....Rs. 16,477
Expenditure in 1865-66 ..... ,, 16,771

Application has been made to obtain the sanction of Government to the above excess.

Additional Machinery for Sir Jamsetjee Bund Water Works.

22. *Poona.*—Machinery purchased.

Allotment for 1865-66.....Rs. 2,572
Expenditure in 1865-66 ..... ,, 2,572

Earthen Dam on top of Sir Jamsetjee's Bund.

23. The temporary dam, which is 857 feet in length, 5 feet high, and 4 feet thick at top, with a rear slope of $1\frac{1}{2}$ to 1, and front slope of 2 to 1, has been constructed on top of the masonry dam, with the

view of increasing the supply of water. The work has proved most effective.

Allotment for 1865-66	Rs.	1,171
Expenditure in 1865-66	,,	1,161

ACCOMMODATION FOR TROOPS.

Laying on Vehar Water to all the Infantry Barracks and Officers' Bungalows at Colaba.

24. *Bombay.*—10,226 running feet wrought iron pipes, varying from 2″ to ½″ have been laid on to supply water to the cook and bath-rooms of the barracks and officers' quarters. On account of the smallness of the Vehar sub-main, and want of sufficient pressure, water is supplied only at night, except at the lower end of the barracks.

Sanctioned amount	Rs.	8,880
Expended in 1865-66	,,	3,790

Laying on Vehar Water to the Depôt Barracks at Colaba.

25. 364 running feet of one and a half, and 251 do. of three-quarters of an inch, and 156 of half an inch wrought iron pipes, have been laid on to supply water to the cookroom, washhouses, and barracks.

Sanctioned amount	Rs.	730
Expended in 1865-66	,,	290

Two temporary Barracks at Colaba to accommodate 40 men each.

26. To prevent overcrowding in the existing barracks occupied by the European Infantry Regiment at Colaba, two temporary barracks, each 253′ × 51′2″ in exterior dimensions, have been commenced. The barracks consist of two rooms 76¼′ × 24′ × 20′ each, with a day room 44′ × 24′ × 20′ in the centre and open veranda in front and rear, the former 13′ and the

latter 12′ wide, in the clear. The work was given to two contractors on the 1st February 1866 to be completed in 3½ months from the date of commencement. The masonry work of the foundation and plinth has been finished, and the roof has been almost completed.

Sanctioned amount ..... Rs. 88,170
Expended in 1865-66 ..... „ 38,800

A temporary Serjeants' Mess and Reading-Room at Colaba.

27. One of the old barrack rooms, which was formerly occupied as a reading-room, being required for the accommodation of the men of H. M.'s 4th King's Own Regiment, a new building, 123½′ × 42′ × 16′ in the exterior dimensions, has been sanctioned for the serjeants' mess and reading-room. The work was commenced in the middle of February last, and is now approaching completion.

Sanctioned amount ..... Rs. 16,570
Expended in 1865-66 ..... „ 9,150

Six temporary separate Bath-rooms for the Troops at Colaba.

28. The bathrooms (9′ × 7′ × 9′ in interior dimensions) have been constructed.

Sanctioned amount ..... Rs. 2,040
Expended in 1865-66 ..... „ 1,900

Constructing six temporary quarters for the Warrant Officers on the Esplanade.

29. This work was commenced in November 1864, but was subsequently postponed on account of the building site having been applied for by the Bombay Exhibition Committee.

The work, however, was resumed in November 1865, and has been completed, and the buildings made over for occupation. The main building consists of two bedrooms and one centre room; the former 15′ × 15′

and the latter 15′ × 20′, with open verandas all round, with corners in the rear enclosed for bathrooms. Two sheds, one for cook and store-room, and the other for servants' quarters, have been attached to each set of quarters.

Sanctioned amount .....Rs. 21,520
Expended in 1865-66 ..... ,, 19,120

Four upper-storied Barracks, Front Bay.

30. *Aden.*—No. 2 barrack has been completed and handed over to the troops, and Nos. 3 and 4 carried up to flooring. No. 1 barrack was handed over last year.

Expended in 1865-66..... Rs. 50,240
Sanctioned for 1865-66 ..... ,, 50,000

Barracks with subsidiary Buildings at Steamer Point.

31. All buildings completed except No. 3 barrack, of which the superstructure upper story is in progress. Work done during the year comprises erection of No. 2 barrack, with its washhouse, urinary, and cookhouses; No. 3 barrack carried up to superstructure upper floor, its washhouse and urinary completed; 2 patcherries for 16 families with their outhouses completed; a library, orderly-room, &c. under one roof also completed.

Expended in 1865-66 ....Rs. 80,940
Sanctioned for 1865-66 ..... ,, 82,000

Additional upper-storied Barrack with subsidiary Buildings at Steamer Point.

32. Commenced this year, during which time the barrack has been carried up to the flooring, 4 bathrooms and 1 washhouse erected, and about 300 running feet of covered passage added to the Steamer Point patcherries.

Expended in 1865-66..... Rs. 29,000
Sanctioned for 1865-66 ..... ,, 29,000

Native Infantry Lines in Camp.

33. Completed. 6 pendals for single men, and 2 for married men roofed this year.

Expended in 1865-66 .....Rs. 10,770
Sanctioned for 1865-66 ..... „ 10,770

Subsidiary Buildings, Isthmus Barracks.

34. Completed. Commissariat Stores completed, and handed over this year.

Expended in 1865-66.....Rs. 16,870
Sanctioned for 1865-66 ..... „ 39,230

Additions and alterations at Perim.

35. Completed. The work has been carried out this year, and comprises improvements to the officers' and gunners' quarters, giving more space to the sepoys, and a room for a hospital.

Expended in 1865-66 .....Rs. 7,590
Sanctioned for 1865-66 ..... „ 7,590

Ventilating Patcherries, European Infantry.

36. All the roofs of the camp patcherries vefitilated. Work all carried out this year.

Expended in 1865-66 .....Rs. 1,080
Sanctioned for 1865-66 ..... „ 1,130

Privies and Urinaries N. I. Lines.

37. Commenced and completed; seats are being altered to suit the standard privy pan.

Expended in 1865-66 .....Rs. 6,210
Sanctioned for 1865-66 ..... „ 6,670

Paving lower rooms, Isthmus Barracks.

38. Commenced and completed this year.

Expended in 1865-66 .....Rs. 3,200
Sanctioned for 1865-66..... „ 3,250

Family Quarters and Outhouses at the Isthmus.

39. Foundations and plinths of 2 patcherries commenced and carried out this year.

Expended in 1865-66 ..... Rs. 10,270
Sanctioned for 1865-66 ..... „ 10,000

Erecting 4 Bathrooms to Barracks.

40. Commenced and completed this year.

Expended in 1865-66 ..... Rs. 5,040
Sanctioned for 1865-66 ..... „ 5,840

Alterations and improvements in the Patcherries of European Infantry and Royal Artillery.

N.B.—Flooring with brick Royal Artillery Patcherries (Rs. 1,134) has not been done from want of time and for other reasons.

41. *Deesa.*—A pavement of brick tiles has been laid down in 63 quarters of married families of the European Regiment, and in verandas; 21 bathrooms have been built in end verandas; 24 iron ridge-ventilators have been placed on roofs. Paving with brick the patcherries of the Royal Artillery barracks was included in the sanction, but the substitution of stone for brick has been considered desirable, and an estimate of the cost has been submitted for sanction during 1866-67.

Sanctioned allotment for 1865-66 ....Rs. 8,929
Expenditure in 1865-66 ..... „ 7,553

Flooring with rough cut-stone the Barracks of the Royal Artillery.

42. Three barracks have been paved with stone.

Sanctioned allotment for 1865-66 (on a revised estimate) .....Rs. 16,476
Expended in 1865-66 ..... „ 16,253

Harness Room for the Royal Artillery.

43. Two buildings on the standard plan, containing respectively 2 harness-rooms, and one harness-room and one workshop, have been built.

Sanctioned (on revised estimate) for

1865-66 ..... Rs. 14,020
Expended in 1865-66 ..... „ 14,020

Stables for the Royal Artillery.

44. Three blocks of stables on standard plan, which were nearly completed last year, were finished at the commencement of this year.

Sanctioned allotment for 1865-66 .... Rs. 3,315
Expenditure in 1865-66 ..... „ 2,930

Enlarging and ventilating Canteen of European Regiment.

45. The building has been lengthened 20 feet, and the roof furnished with ventilators.

Sanctioned allotment for 1865-66. .... Rs. 1,995
Expended in 1865-66 ..... „ 1,986

Quarters for the Provost Serjeant of European Regiment.

46. The building contains two main rooms, $16\frac{1}{2}' \times 16'$ and $13' \times 16'$, and two smaller rooms $17' \times 8'$ and $14' \times 8'$, with an open veranda on three sides. A cookroom and a privy separate are built in rear.

Sanctioned allotment for 1865-66 .... Rs. 3,522
Expended in 1865-66 ..... „ 3,354

Raising the Roof of Hospital, Royal Artillery.

47. The main walls of the entire building, which is in three blocks, have been raised 3 feet, and clerestory windows have been inserted between main and veranda roofs.

Sanctioned allotment for 1865-66 .... Rs. 3,995
Expended in 1865-66 ..... „ 3,757

48. Each of the 11 barracks had a small water room in rear. These have been enlarged and altered so as to give each barrack a lavatory, with stands for basins and a private bathroom.

Altering old and adding new Lavatories to the Barracks, European Regiment.

Sanctioned allotment (revised) in 1865-66. Rs. 1,486
Expended in 1865-66..... „ 1,358

49. Two latrines of 6 seats each on standard pattern have been built.

New Latrines for Royal Artillery.

Sanctioned allotment (revised) for 1865-66 Rs. 1,558
Expenditure in 1865-66..... „ 1,558

50. Of the two blocks of 10 family quarters required, one (1) block of 10 quarters was commenced. Masonry work is nearly complete, and the woodwork of the roof nearly on.

Permanent Family Quarters for European Regiment.

Sanctioned amount .....Rs. 54,160
Allotment for the year not known.
Expended in 1865-66..... „ 23,000

51. Four barracks have been commenced.

Temporary Barrack Buildings.

No. 1 is complete with the exception of a few internal fittings, &c.; No. 2 nearly complete, ready for tiling; No. 3 raised 14 feet above ground level, and No. 4 just commenced. Each barrack to contain 24 men and one non-commissioned officer. Two hospital wards have been raised to heights of 10 feet and 8 feet above ground; each ward will contain 22 beds, allowing 120 superficial feet per patient.

Sanctioned allotment in 1865-66—

European Infantry	Rs.	50,000
Do. Hospital	„	12,671
Royal Artillery	„	5,000
	Rs.	67,671

Expended in 1865-66—

European Infantry	Rs.	43,239
Do. Hospital	„	12,553
Total	Rs.	55,792

52. *Mount Aboo.*—The quarter-guard was commenced in May last, and is now near completion. The hospital was commenced in September, and its superstructure is nearly up to the first floor level. The female ward was commenced in January, and its superstructure is about 4 feet high. The two patcherry blocks for 12 families each were commenced in July; the superstructure of one is 11 feet and of the other 5 feet high; and the foundations and plinths of two of the cookhouses thereto are laid. The canteen was commenced in January, and it is now ready for roofing. The four staff serjeants' quarters were commenced in January also; the superstructure of that for the quarter-master serjeant is 10 feet high; and the foundations and plinths of the other quarters are ready for superstructure. The cells (2) were commenced simultaneously with the quarter-guard, and are now ready for occupation. The library and reading and coffee rooms were commenced in May and completed in January. Two wells for the hospital and patcherries, as also bridged roads to connect the latter buildings with the barracks, have been commenced during the year under report.

Barracks.

Sanctioned allotment for 1865-66	Rs.	92,316
Expended in 1865-66	„	92,459

Constructing three temporary Stables for the accommodation of 57 horses for Royal Artillery.

53. *Ahmedabad.* — Work completed.

Sanctioned ..... Rs. 2,358 0 0
Expended ..... „ 2,174 15 10

Constructing (3 sets) Outhouses for the European Barracks.

54. These works are still in progress; the foundations have been got in or nearly so. Woodwork and materials collected.

Estimated ..... Rs. 45,582 0 0
Sanction for 1865-66 ..... „ 30,000 0 0
Expended ..... „ 25,310 6 10

Three (permanent) Stables for the Royal Artillery.

55. Masonry complete; woodwork sawn up, and in course of erection.

Sanction and estimate ..... Rs. 17,691 0 0
Expended ..... „ 14,498 6 4

Adding back Veranda to the Family Quarters of the Royal Artillery.

56. Work completed.

Estimate sanctioned ..... Rs. 7,146 0 0
Expended ..... „ 6,131 15 10

Paving three (3) Persian Barracks with stone.

57. The floors of two barracks have been flagged and completed; stone for the third barrack has been collected and prepared.

Estimate ..... Rs. 24,888 0 0
Grant ..... „ 20,000 0 0
Expenditure ..... „ 18,979 9 8

Additions and alterations to the Royal Artillery Hospital.

58. Materials collected only. Work was stopped to allow of the

preparation of a design for an entirely separate ward, in lieu of merely an addition to the present hospital.

Estimate	Rs.	3,650	0	0
Sanction	„	1,000	0	0
Expenditure	„	233	7	4

Constructing permanent Family Quarters for 12 Families Royal Artillery, with Outhouses.

59. The greater part of the masonry has been completed, and the roofing is being put on. Rs. 41,580 have been provided for expenditure during the current year.

Estimate	Rs.	48,020	0	0
Sanction for 1865-66	„	26,000	0	0
Expenditure in 1865-66	„	16,195	8	6

Constructing two temporary Barracks to hold 24 men and 1 Non-Commissioned Officer each.

60. One of these has been completed, and is at present occupied by the troops; the remaining one is about to be completed, and will be ready for occupation in a few days.

Estimate	Rs.	32,160	0	0
Sanction for 1865-66	„	26,000	0	0
Expenditure	„	28,964	14	9

Constructing Solitary Cells for Native Infantry.

61. *Surat.*—Work completed, with the exception of some few trifling items.

Allotment for 1865-66	Rs.	1,806
Expenditure in 1865-66	„	1,683
Saving	Rs.	123

Renewing brick and chunam floors of the Artillery Hospital at Baroda.

62. Work completed.

Allotment for 1865-66..... Rs. 1,632
Expenditure in 1865-66 ..... „ 1,492
Saving....Rs. 140

Making certain additions and alterations to the Quarter Guard occupied by the Battery Royal Artillery at Baroda.

63. Work completed.

Allotment for 1865-66 ..... Rs. 1,228
Expenditure in 1865-66 ..... „ 1,108
Saving.....Rs. 120

Quarters for Sick Officers at Matheran.

64. *Northern Concan.*—Quarters for three officers completed, with the exception of fixtures and fastenings. The general completion of the building will take about three months. Orders have recently been received to finish these buildings.

Allotment for 1865-66 ..... Rs. 100
Expended in 1865-66 ..... „ 73
Balance unexpended ..... Rs. 27

Constructing two upper-storied Barracks and one range of Patcherries with subsidiary Buildings at Wanowree.

65. *Poona and Kirkee.*—Owing to dilatoriness on the part of the contractors, the barracks were taken out of the hands of the Bombay Contract and Building Company in the month of November 1865 and carried on departmentally. One barrack will be finished by the end of May and the other by the end of the following month. The patcherries and out-offices which were undertaken departmentally have been completed.

Allotment for 1865-66 ..... Rs. 82,048
Expended in 1865-66 ..... „ 86,300

Constructing a range of Family Quarters for the European Sappers and Miners at Poona with subsidiary Buildings.

66. These patcherries, which are built to contain 20 families, are finished, and their subsidiary buildings nearly so.

Allotment for 1865-66 ..... Rs. 10,637
Expended in 1865-66 ..... „ 8,551

Constructing nine lower-storied Barracks at Kirkee, including fittings, &c.

67. Completed.

Allotment for 1865-66 ..... Rs. 11,859
Expended in 1865-66 ..... „ 10,232

Paving the floors of the old Barrack at Ghorepooree.

68. Completed. Five barracks have been paved with cut stone.

Allotment for 1865-66 ..... Rs. 15,217
Expended in 1865-66 ..... „ 15,025

Constructing a Garrison Library at Kirkee.

69. Owing to bad construction it was found necessary to remove the walls of the buildings and to reconstruct them; they have been rebuilt to a height of 12 feet.

Allotment for 1865-66 ..... Rs. 4,152
Expended in 1865-66 ..... „ 3,678

Erecting Iron Stabling for the Royal Horse Artillery at Kirkee.

70. Iron stabling for 100 horses has been put up, and iron sheds for a similar number ordered from England.

Allotment for 1865-66 ..... Rs. 32,160
Expended in 1865-66 ..... „ 326

Providing Roof Ventilation to the Family Quarters at Wanowree.

71. Completed.

Allotment for 1865-66 ..... Rs. 223
Expended in 1865-66 ..... „ 209

Constructing Family Quarters for 9 Families of the Garrison Battery at Wanowree.

72. Nearly completed.

Allotment for 1865-66 ..... Rs. 15,584
Expended in 1865-66..... „ 15,581

Constructing additional four Barracks at Kirkee.

73. Nothing was undertaken in connection with this work during the year under review, the plans being under revision.

Allotment for 1865-66 ..... Rs. 90,986
Expended in 1865-66 ..... „ 34

Improving the floors of seven Barracks at Kirkee.

74. Pavements of three out of eight barracks have been chisel-dressed.

Allotment for 1865-66 ..... Rs. 3,251
Expended in 1865-66 .... „ 3,160

Constructing Matron's and Assistant Matron's Quarters at Kirkee.

75. Completed.

Allotment for 1865-66 ..... Rs. 5,898
Expended in 1865-66..... „ 5,731

Constructing a temporary Hospital for the 3rd Light Cavalry at Ghorepooree.

76. Completed; some alterations and additions were also carried out to this building.

Allotment for 1865-66 ..... Rs. 3,578
Expended in 1865-66 ..... „ 3,548

Making certain alterations to the Married Men's Quarters at Wanowree and Sappers' Lines.

77. About two-thirds completed.

Allotment for 1865-66..... Rs. 1,654
Expended in 1865-66 ..... „ 1,292

Making certain alterations and additions to the Hospital at Ghorepooree.

78. A new building for a surgery and a dispensary, with alterations and additions to the main building, as recommended by the Sanitary Commission, have been nearly completed.

Allotment for 1865-66 ..... Rs. 10,741
Expended in 1865-66..... „ 9,818

Constructing a Shed for Sick Carts required for all the Military Regimental Hospitals at Poona and Kirkee.

79. Nearly completed.

Allotment for 1865-66..... Rs. 1,852
Expended in 1865-66 ..... „ 1,727

Constructing 14 half-company temporary Barracks at Poona.

80. Seven of these barracks have been nearly completed, and of the rest five chuppered in; the remaining two are in progress.

Allotment for 1865-66 ..... Rs. 1,52,000
Expended in 1865-66..... „ 11,447

Constructing four temporary Patcherries for 40 Families at Poona.

81. About three-fourths of the work has been executed.

Allotment for 1865-66 ..... Rs. 78,306
Expended in 1865-66..... „ 2,189

Improving the Drainage of the Barracks, Family Quarters, and Hospital at Ghorepooree.

82. Ten barracks have been provided with sheet iron eaves gutters.

Allotment for 1865-66 ..... Rs. 22,985
Expended in 1865-66..... „ 3,000

Making certain Improvements to the Buildings at Kirkee recommended by the Sanitary Commission.

83. Nothing was done to this work in 1865-66 beyond making arrangements for commencing it, the sanction having been received in April.

Allotment for 1865-66.....Rs. 15,046
Expended in 1865-66 .....

Completing the flooring of the upper-story of the Horse Artillery Barracks at Wanowree.

84. The remark against the preceding work applies to this.

Allotment for 1865-66 .....Rs. 1,088
Expended in 1865-66 .....

Building new Huts for the 22nd Regiment and the Sappers and Miners at Poona and Kirkee.

85. Eight blocks of huts, affording accommodation for 240 sepoys, with quarters for 12 native officers for the 22nd Regiment at Poona, and 11 blocks containing accommodation for 266 native sappers, with quarters for five native commissioned officers at Kirkee, have been built. This work was ordered on emergency and commenced before sanction was received.

Expended in 1865-66..... Rs. 48,059

Supplying Water from river to Plunge-Bath.

86. *Kirkee.*—Completed.

Allotment for 1865-66..... Rs 1,307
Expenditure in 1865-66 ..... „ 1,004

87. *Poona Districts.*—One barrack was built in 1864-65; the other reported as half finished in last year's concise report has been completed.

Two new Barracks with Out-houses at Poorundhur.

Allotment for 1865-66	Rs.	8,589
Sanctioned in Government Resolution No. $\frac{18 \text{ M.W.}}{68}$ of 11th January 1866	„	6,280
	Rs.	14,869
Expended in 1865-66	„	14,581

88. The portion unfinished when the last year's report was sent has been completed.

Apothecary's and Apprentices' Quarters at Poorundhur.

Allotment for 1865-66	Rs.	2,385
Sanctioned in Government Resolution No. $\frac{18 \text{ M.W.}}{68}$ of the 11th January 1866 ..	„	1,038
	Rs.	3,423
Expended in 1865-66	„	3,423

89. Barrack No. 1 (a chuppered building) was destroyed by fire in March 1865. A plan and estimate were submitted in May 1865 for rebuilding a new one, and the work, which was sanctioned by Government in Resolution No. $\frac{339 \text{ M. W.}}{2185}$ of 14th October 1865, commenced in November 1865, and completed before the termination of the official year. The building is of coursed rubble masonry, roughly dressed on the outer face, and with a double-tiled roof; it accommodates 30 men, giving each 77 superficial feet.

Constructing a Barrack at Poorundhur in lieu of one destroyed by fire.

Amount sanctioned.....	Rs.	14,727
Amount expended in 1865-66	„	14,715

Removal of Huts near the Bazaar at Poorundhur.

90. At the suggestion of the President of the Sanitary Commission some huts near the bazaar were removed, and the sum undermentioned paid on account of compensation; the work was carried out by the officer commanding at Poorundhur.

Amount sanctioned for 1865-66 ..... Rs. 3,466
Amount expended in 1865-66 ..... „ 3,466

Stables and subsidiary buildings for the Royal Artillery in Camp.

91. *Belgaum.*—The school and orderly-rooms with staff serjeants' quarters, which were in the last report stated to be in progress, have been brought to completion.

Allotment for 1865-66..... Rs. 5,000
Expended in 1865-66..... „ 6,731

Additional subsidiary buildings for Royal Artillery,

92. These consist of a workshop, forge, guard-rooms for horse lines, and quarters (detached) for two staff serjeants. The regimental magazine only remains to be built; this was commenced but suspended at the request of the local military authorities, the building not being immediately required.

Allotment for 1865-66 ..... Rs. 9,416
Expenditure up to 30th April 1866.... „ 9,226

Two new Staff Serjeants' Quarters for European Infantry.

93. The foundations, superstructure, and woodwork of roofing of these buildings are completed, and they will be ready for occupation, it is trusted, before the rains commence.

Allotment for 1865-66 ..... Rs. 5,612
Expenditure in 1865-66..... „ 5,130

Bathrooms to Washhouses of Baracks in Fort and Cantonment.

94. Nearly completed.

Allotment for 1865-66 ..... Rs. 3,518
Expenditure in 1865-66..... ,, 3,237

Temporary Barracks for European Infantry.

95. Three barracks of temporary construction above the plinths with permanent foundation and plinths, and 2 purely temporary barracks were commenced, and considerable progress had been made at the termination of the official year. The 3 temporary barracks on permanent plinths are designed in accordance with the most recent standard plans received for an upper-storied barrack.

The purely temporary barracks were ordered to be erected in exact accordance with the design supplied for the Poona barracks, a description of which was submitted to Government and approved.

Expenditure in 1865-66..... Rs. 59,652

Constructing a Retail Shop to the end of the Canteen of the European Infantry Barracks at Belgaum.

96. The building is of ordinary construction and needs no special remark.

Sanctioned amount for 1865-66 .... Rs. 1,388
Expenditure in 1865-66 ..... ,, 1,335

Restoring the Shapoor Aqueduct.

97. *Ahmednuggur.*—9,562 running feet of clearing and removing old and replacing new earthenware piping, with excavation in earth and refilling do., has been completed. The old gallery to the extent of 4,820 feet has been cleared out and repaired.

Allotment for 1865-66 ..... Rs. 12,468
Expenditure in 1865-66 ..... ,, 8,745

98. The female ward hospital, with the exception of paving, has been completed, and other improvements to subsidiary buildings have been made. The major portion of the works in connection with the above is in abeyance, pending instructions and sanction of revised designs which have to be prepared according to the Sanitary Commission's report, some of the plans and estimates of which have been submitted, and the remainder are under preparation and will shortly be sent in.

Barracks for Royal Horse Artillery.

Allotment for 1865-1866	Rs.	40,813
Expenditure in 1865-66	„	21,222

99. This work was commenced in February 1866, and the walls of 4 cookrooms are nearly completed, roofing, &c. being in preparation.

Alterations and improvements to Cookrooms, Cavalry Lines.

Sanctioned amount for 1865-1866 ..	Rs.	17,456
Expenditure in 1865-66	„	3,465

100. There are 12 barracks, the flooring of 8 of which has now been completed, 6 having been done during the last two years. On the recommendation of the Sanitary Commission a better description of paving than that originally proposed for the barrack-room has been provided, and of course at an increased cost, which will render it necessary to revise the estimate.

Paving Floors of Cavalry Barracks.

Allotment for 1865-1866	Rs.	5,465
Additional sanction	„	2,017
Expenditure in 1865-66	„	10,094

101. These buildings were in a measure suspended for some time, owing to a reference made by the Military authorities relative to the confined nature of

Stables for 500 Horses of Cavalry.

the blocks completed in accordance with the original design. An amended plan was called for and submitted, in which the width of the centre passage between the two rows of horses was increased from 4 to 6 feet, besides giving an additional foot of width to the space, viz. 7 feet, to be occupied by the horses. Three stables have been completed according to the amended design, and a considerable quantity of materials collected for the further progress of the work.

Allotment for 1865-66 ..... Rs. 15,035
Expenditure in 1865-66 ..... „ 19,950

Temporary Barrack for 21 men of the G-14 Royal Artillery.

102. *Sholapoor.*—The object of this work was to provide additional temporary accommodation for 21 men of the G-14 Royal Artillery to admit of each man having the regulated superficial space allotted to him.

Expended in 1865-66 ..... Rs. 7,601

Plunge-Bath for European Infantry.

103. *Sattara.*—This building, which is situated in the Government garden, and derives its supply of water from the well in that place, has been found to afford much recreation to the men of the detachment of the 4th Foot; the bath is 30′ × 15,′ with a depth at the two ends of 4 and 6 feet respectively; there is a dressing room (15′ × 10′) at one end of the building fitted with pegs, &c. on which to hang the men's clothes.

Allotment for 1865-66 ..... Rs. 3,900
Expenditure in 1865-66..... „ 4,328

Improvements to Rifle Range.

104. Two large butts (100′ × 8′ × 8′) have been erected on a convenient spot in the vicinity of camp, and the ground levelled and marked out to obtain a clear range of 900 yards.

Allotment for 1865-66..... Rs. 3,454
Expenditure in 1865-66 ..... ,, 2,793

Lavatories for the European Barracks.

105. Four buildings (9′ × 8′), one for each barrack, have been erected; the walls are 14 feet high, and cisterns, containing 300 gallons, formed of teak have been provided, with the requisite apparatus for supplying shower-baths for the men, which were made use of to a considerable extent during the hot weather.

Sanctioned amount for 1865-66 ..... Rs. 3,360
Expenditure in 1865-66 ..... ,, 2,531

Temporary Barracks for the accommodation of 48 men.

106. This building is composed of two dormitories and one day room, built to afford the requisite superficies for each person.

Sanctioned amount for 1865-66..... Rs. 24,753
Expenditure in 1865-66..... ,, 19,228

New Outposts for the detachments of the Sind Horse at Goranaree, Sunree, Toj, Sooee, and Kusmore on the Frontier of Upper Sind.

107. *Sind.*—The outposts at Sunree and Kusmore, each affording quarters for 60 sowars, and stabling for the same number of horses, with quarter-guard, non-commissioned officers' quarters, as well as the outposts at Goranaree and Toj, accommodating 26 men with stabling, &c., will be completed by the 1st May 1866. The outpost at Sooee alone remains to be completed. This is the largest, and is designed to accommodate 100 sowars and 50 rank and file of Jacob's Rifles, hospital, quarter-guards, quarters for native officers and hospital assistant, &c., being provided. Wells, 20 feet diameter, have been sunk at all the posts. The sinking of these wells has been attended with serious difficulty, one of

the wells at Sooce having been sunk to a depth of 70 feet through very hard soil before water was reached. The Executive Engineer Upper Sind reports that the progress of the works at Sooee has been delayed owing to the difficulty in procuring proper brick earth, which had to be brought a distance of 18 miles on camels.

Expenditure during the year 1865-66 .. Rs. 51,240

A road to connect these outposts is under construction. Rupees 4,400 have been spent during the year.

Additions to the Royal Artillery Barracks at Kurrachee.

108. The following works have been commenced and completed at Kurrachee during the year :—

	Expenditure.
Quarters for an assistant apothecary and 2 apprentices attached to the Royal Artillery hospital..... Rs.	6,806
Quarters for 4 staff serjeants, Royal Artillery ..... „	14,153
Skittle-shed and bowling-alley for the Royal Artillery ..... „	2,855

Sick Stables for Royal Artillery; and Guard Room for Europeans in the Fort, Hydrabad.

109. At Hydrabad the following buildings have been constructed :—

Stables for the sick horses of the Royal Artillery at a cost of ..... Rs.	3,222
A guard-room for Europeans in the fort at an expenditure of ..... „	3,350

ORDNANCE.

Quarters for Duputy Commissary of Ordnance and subordinates.

110. *Aden.*—Superstructure of quarters raised to roofing, and rafters fixed. Work commenced this year.

Expended in 1865-66 ..... Rs. 16,120
Sanctioned for 1865-66 ..... „ 16,000

Reserve Powder Magazine at Durub-el-Hosh.

111. Commenced this year; arching and superstructure to springing completed.

Expended in 1865-66 ..... Rs. 19,020
Sanctioned for 1865-66 ..... „ 19,000

A Veranda Shed at Isthmus Arsenal for Guns and Limbers.

112. Squared timber procured from Bombay.

Expended in 1865-66 ..... Rs. 14,000
Sanctioned for 1865-66 ..... „ 10,000

Constructing a Powder Magazine to hold 25,000lbs. of Powder.

113. *Ahmedabad.*—Operations have been confined to cutting up the woodwork, the question of the site not having been settled. No other work was put in hand. Rupees 3,500 have been provided in the Budget for expenditure in 1866-67.

Sanctioned for 1865-66 ..... Rs. 5,200 0 0
Expenditure in 1865-66 ..... „ 962 8 0

Gunpowder Factory.

114. *Kirkee.*—Seventeen buildings completed; 8 in progress; the whole of the machinery has not yet arrived, nor is any arrangement being yet made for the necessary supply of water.

Allotment for 1865-66 ..... Rs. 2,50,000
Expenditure in 1865-66 ..... „ 1,15,584

COMMISSARIAT.

Erecting a 4-ton Travelling Crane at the Pier of Obstruction for the Commissariat Department.

115. *Aden.*—Work commenced and completed this year.

Expended in 1865-66 ..... Rs. 2,080
Sanctioned for 1865-66 ..... „ 2,430

Commissariat Storeroom.

116. *Mount Aboo.*—Was completed in January 1866.

Sanctioned allotment for 1865-66 .... Rs. 6,437
Expended in 1865-66 .... „ 6,420

Barrack Store.

117. Was commenced in February, but its progress was delayed in consequence of the then existing difficulty of obtaining sites for the manufacture of bricks. The superstructure of the building is about 3 feet high.

Sanctioned allotment for 1865-66 .... Rs. 2,412
Expended in 1865-66..... „ 576

New Steam Bakery, including additional buildings required to complete it.

118. *Poona.*—Completed, with the exception of the additional buildings, which are more than half finished.

Allotment for 1865-1866... ..... Rs. 6,013
Expenditure in 1865-66 ..... „ 4,312

Verandas to the Commissariat Storeroom.

119. Nearly completed.

Allotment for 1865-66 ..... Rs. 2,369
Expenditure in 1865-66..... „ 1,830

MILITARY FINANCE OFFICES.

Hotel Building for Military Finance Offices.

120. Most of the alterations required to make the building suitable for the offices have been completed.

Allotment for 1865-66 ..... Rs. 5,000
Expenditure in 1865-66..... „ 5,000

CIVIL BUILDINGS—REVENUE.

Putting up Steam Travelling Cranes at the Town Custom House Bunder.

121. *Bombay.*—Two five-ton cranes were received from England in the month of December 1865, and have been erected on the Town Custom House Wharf.

1st sanctioned amount	Rs.	1,100
2nd do. do.	„	910
	Rs.	2,010
Expended in 1865-66	„	2,190

Reclamation between the Dockyard and Apollo Pier for the site of the new Post Office and Telegraph Office.

122. This reclamation is 4½ acres in extent, and is intended to be the site of the new Post Office. The sea wall face is 365 feet in length, with a re-entering basin 100′ × 50′, with a flight of stone steps for the express use of officers of rank and all officers on duty in uniform. About three-fourths of the walling and two-thirds of the filling-in has been done by the Contract and Building Company. It has been recommended to Government to break the contract.

Amount of contract	Rs.	2,80,380
Allotment for 1865-66	„	2,07,630
Expended in 1865-66	„	1,28,250

Fitting an iron Tank in the Basin with a shed over it, between the Gridiron Slip and the Breakwater in the Dockyard, for the Telegraph Department.

123. This shed was completed, with the exception of putting on tiles on the roof, but owing to the striking of the tank, from want of sufficient ballast in it, against the posts during the high tides in the month of March 1866, the whole structure was put out of order, and the shed has in consequence been removed. It is not now required by the Marine authorities.

Sanctioned for 1865-66..... Rs. 1,770
Expended in 1865-66 ..... „ 1,280

Cutcherry complete with subsidiary buildings and enclosure wall and Officers' quarters over entrance gate at Morassa.

124. *Ahmedabad.*—This building is in a forward state, and will be finished completely by the end of June or middle of July. Rs. 3,651 have been provided in the Budget for 1866-67.

Estimate	Rs.	19,253	0	0
Sanctioned for 1865-66	„	15,590	0	0
Expenditure in 1865-66	„	12,872	10	1

Cutcherry complete with subsidiary buildings and enclosure wall at Sanund.

125. Will be completed by the end of June; the masonry is completed, and the materials for the roofing collected. Rs. 3,955 provided for in 1866-67.

Estimate	Rs.	12,760	0	0
Sanctioned for 1865-66	„	8,805	0	0
Expended in 1865-66	„	8,461	0	4

Assistant Collector's House and Cutcherry and Outhouses at Godra.

126. *Kaira.*—In progress, and will be completed before the monsoon.

Budget estimate ..... Rs. 16,943
Actual expenditure ..... „ 9,943

Balance.... Rs. 7,000

Mamlutdar's Cutcherry at Mehmoodabad.

127. In progress, but will not be completed before the monsoon.

Budget estimate ..... Rs. 10,391
Actual expenditure ..... „ 1,046

Balance.... Rs. 9,345

Dwelling-house for the Suzadar and Carcoons at Jeao Salt Works.

128. *Surat.*—Foundations filled in, plinth and three-quarters of superstructure completed, all woodwork ready.

Allotment for 1865-66	Rs.	5,755
Expenditure in 1865-66	,,	4,132
Balance....	Rs.	1,623

Fitting up new Wooden Shelves for the Dufter Room in the Collector's Cutcherry at Broach.

129. Work completed.

Allotment for 1865-66.....	Rs.	2,040
Expenditure in 1865-66	,,	2,015
Saving....	Rs.	25

Additions and alterations to the Mamlutdar's Cutcherry at Pimpulnair.

130. *Khandeish.*—Have been nearly completed, and at an expenditure during the year of Rupees 1,971.

Constructing a Mahalkurry's Cutcherry with subsidiary Buildings at Tulloda.

131. Commenced in February 1866, and Rs. 2,613 have been spent principally in collection of material.

Mamlutdar's Cutcherry at Mahim.

132. *Northern Concan.*—Not commenced; the allotment for the expenditure shown is the cost of advertisement for tenders.

Allotment for 1865-66	Rs.	14,847
Expenditure in 1865-66.....	,,	4
Balance unexpended....	Rs.	14,343

Mamlutdar's Cutcherry at Panwell.

133. Not commenced; materials collected at site.

Allotment for 1865-66	Rs.	14,847
Expenditure in 1865-66	,,	931
Balance unexpended	Rs.	13,916

Mamlutdar's Cutcherry at Bassein.

134. About half of the foundations excavated and filled in.

Allotment for 1865-66	Rs.	14,847
Expended in 1865-66	,,	2,746
Balance unexpended	Rs.	12,101

Mamlutdar's Cutcherry at Kurjut.

135. Foundations, plinth, and one-third superstructure finished. The roof will be put on before the setting in of the monsoon; woodwork nearly ready.

Allotment for 1865-66	Rs.	15,000
Expended in 1865-66	,,	5,005
Balance unexpended	Rs.	9,995

Mamlutdar's Cutcherry at Mangaum.

136. Sanction received very late in the season. One-fourth of the foundations excavated and materials collected at site.

Allotment for 1865-66	Rs.	14,847
Expended in 1865-66	,,	1,005
Balance unexpended	Rs.	13,842

Custom House at Karunja.

137. Superstructure and roof completed, doors and windows fixed. Finished.

Allotment for 1865-66	Rs.	1,273
Expended during 1865-66	„	1,238
Saving....	Rs.	35

Custom House at Alibaug.

138. Completed.

Allotment for 1865-66	Rs.	303
Expenditure during 1865-66	„	800
Saving....	Rs.	3

Quarters for the Customs' Establishment at Rymoordhey.

139. The buildings as originally designed are completed, but the Customs authorities desire the roof of the veranda to be double tiled.

Allotment for 1865-66.....	Rs.	2,072
Expended in 1865-66.....	„	1,787
Balance unexpended....	Rs.	285

Post Office at Rurtoohdee.

140. Roof put on, doors, windows, and a letter box fixed. Completed.

Allotment for 1865-66.....	Rs.	735
Expended in 1865-66	„	735

Fouzdar's Cutcherry at Khundalla.

141. *Poona District.*—Completed.

Allotment for 1865-66	Rs.	6,401
Expenditure in 1865-66	„	6,401

New Treasury Room for Collector's Cutcherry at Ahmednuggur.

142. *Ahmednuggur.*—Nearly completed.

Allotment for 1865-66	Rs.	3,554
Expenditure in 1865-66	„	3,356

143. This building, originally the property of the Irregular Cavalry, was purchased by Government to be converted into a Mamlutdar's cutcherry. Completed.

Alterations and additions to Mamlutdar's Cutcherry at Seroor.

Allotment for 1865-66.....Rs 2,047
Expenditure in 1865-66 ..... ,, 2,021

Mamlutdar's Cutcherry at Sawurgaum.

144. *Nassick.*—Completed.

Sanctioned amount for 1865-66 .....Rs. 12,182
Expenditure in 1865-66 ..... ,, 7,867

Lock-up for Mamlutdar's and Fouzdar's Cutcherry at Sholapoor.

145. *Sholapoor.*—Completed during the year.

Allotment for 1865-66.....Rs. 7,118
Expenditure in 1865-66 ..... ,, 7,117

Mamlutdar's Cutcherries at Jehoor, Bagewaree, and Sindjee.

146. The cutcherry at Jehoor is nearly completed, and two-fifths of the other two, which have been transferred to the Executive Engineer, Kulladghee.

Allotment for 1865-66 .....Rs. 25,926
Expenditure in 1865-66 ..... ,, 21,920

Mamlutdar's Cutcherry at Etta.

147. *Sattara.*—Alterations have been made to provide accommodation for the offices of the Mamlutdar and Police Magistrate.

Expenditure in 1865-66 .....Rs. 2,487

Renewing Mehra Mamlutdar's Cutcherry.

148. A large portion of the old building was destroyed by fire, and in making the necessary restoration opportunity was taken to build anew the sheds

facing two sides of the quadrangle, and of providing accommodation for the Mamlutdar's and Carkoon's offices, &c.

Expended in 1865-66 .....Rs. 2,010

Mamlutdar's Cutcherry with Tower at Belgaum.

149. *Belgaum.*—Completed.

Allotment for 1865-66 .....Rs. 4,000
Expenditure in 1865-66 ..... „ 4,829

Mamlutdar's Cutcherry with Tower at Khanapoor.

150. Superstructure in progress.

Allotment for 1865-66..... Rs. 6,000
Expenditure in 1865-66 ..... „ 5,934

Mamlutdar's Cutcherry at Sowudutty.

151. Superstructure in progress.

Allotment for 1865-66 ..... Rs. 7,000
Expenditure in 1865-66 ..... „ 4,872

Record Room to the Mamlutdar's Cutcherry at Budamee.

152. Completed.

Allotment for 1865-66..... Rs. 2,164
Expenditure in 186-665 ..... „ 2,105

Mamlutdar's Cutcherry at Hoongoond.

153. *Kulladghee.*—Two-thirds completed.

Allotment for 1865-66 ..... Rs. 8,000
Expenditure about ..... „ 8,000

Collector's Cutcherry with outhouses at Carwar.

154. *Canara.*—Completed with the exception of the roofing over the outhouses. The cutcherry is an upper-storied building situated close to the sea-shore, and owing to the fact of its having been built on sand the work has cost considerably more than was first anticipated. It provides accommodation for the Collector,

his Assistants, and office establishment on the upper story, while the Deputy Collector with his establishment and treasury are accommodated in the lower. It is "pucka" built throughout; the masonry work, with the exception of a small portion which is burnt brick and lime, is of laterite and lime, the walls being plastered inside and out with chunam. All the woodwork in floors, roof, doors, windows, staircases, &c. is teak, and the roof is double tiled, with ridge, hips, and leaves set in chunam.

Mamlutdar's Cutcherry at Carwar.

154A. Commenced and completed during the year.

Mamlutdar's Cutcherry at Hullial.

155. Owing to the difficulty of procuring labour, consequent on the unhealthiness of the district and the change of site, the work has not progressed very satisfactorily; a large amount of materials has, however, been collected, and the superstructure is now approaching completion.

Mamlutdar's Cutcherry at Coompta.

156. Completed with all the subsequent additions and alterations.

Bungalow for an Assistant Collector at Sircy.

157. Purchased for Rupees 3,500.

Post Office at Poorundhur.

158. *Poona Districts.*—The remainder of the roof work has been completed this year.

Allotment for 1865-66 ..... Rs. 453
Expenditure in 1865-66 ..... „ 442

A Cutcherry for the Mookhtyarkar at Shahbunder in the Kurrachee Collectorate, with Treasury and Lines for Police.

159. Were in process of construction, and will probably be finished in May 1866.

Expenditure during the year 1865-66.. Rs. 4,029

GENERAL.

Lighting the Government Houses at Parell and Malabar Point with Gas.

160. *Bombay.*—This work has been contracted for by the Bombay Gas Company, Limited, and with the exception of inner fittings, the whole of the work has been completed.

Sanctioned for 1865-66..... Rs. 24,600
Expended in 1865-66..... „ 13,010

Putting up iron wire arches for creepers in the Government Garden at Parell.

161. Two semicircular iron arches 32′ wide, supported on iron wire columns 3′ in diameter and 20′ high, have been put up to support creepers.

1st Sanction..... Rs. 2,060
2nd do. ..... „ 170
Rs. 2,230
Expended in 1865-66..... „ 2,230

Public Buildings at Matheran.

162. *Northern Concan.*—The ceiling of the main building whitewashed and painted. Superstructure of the outhouses finished and the roof put on. Completed.

Allotment for 1865-66..... Rs. 872
Expenditure in 1865-66..... „ 872

New Government House at Gunnesh Khind, including Quarters for the Staff, &c.

163. *Poona.*—The house has been built up to the plinth. Staff quarters Nos. 1 and 2 nearly finished.

Allotment for 1865-66 ..... Rs. 3,50,000
Expenditure in 1865-66 ..... „ 47,517

Laying out Garden at Government House Gunnesh Khind.

164. In progress.

Allotment for 1865-66 ....Rs. 4,085
Expenditure in 1865-66 ..... ,, 4,085

Temporary buildings near Government House at Gunnesh Khind, including Sheds for Escort.

165. Completed.

Allotment for 1865-66 .....Rs. 4,129
Expenditure in 1865-66 ..... ,, 3,449

Wooden Bungalow for Military Secretary to His Excellency the Governor at Gunnesh Khind.

166. Completed.

Allotment for 1865-66 .....Rs. 7,899
Expended in 1865-66 ..... ,, 7,729

Bungalow for the Superintendent of the Cinchona Plantation at Lingmulla.

167. *Sattara.*—The accommodation provided consists of 4 rooms one 18′ × 14′, the other 14′ × 14′, with bathrooms and the necessary outhouses for servants. Corrugated iron has, by permission, been substituted for the tiled roof originally proposed.

Expenditure in 1865-66 ..... Rs. 6,822

Propagating House for Cinchona Plantation at Lingmulla.

168. This is also a permanent building covered with iron sheet roofing.

Expenditure in 1865-66 ..... Rs. 1,913

Leper Ward at Jamsetjee Jejeebhoy Hospital.

169. *Bombay.*—The Architectural Executive Engineer and Surveyor reports:—

" This building is the gift of the Honourable Mr. Rustomjee Jamsetjee Jejeebhoy. The main building consists of two large wards ($27\frac{1}{2}' \times 19\frac{1}{2}'$), and two small wards ($24' \times 19\frac{1}{2}'$), with open corridors 11 feet in width in the front

and rear and 10 feet in width at the ends ; in the two front angles of the corridors there are two bathrooms (12′ × 12′), and in the rear angles two necessaries of similar size, including passages partitioned off. There is also a carriage porch covering 32′ × 20′, with three open archways on clustered columns similar to the arches of the corridors, and a carriage archway of similar construction affording a clear way of 10 feet in width between the plinths of the bases. The architecture of the building is early English of the 2nd period, and its construction is of irregular coursed Breccia rubble with calcareous sandstone dressing. The roof over rooms are open timber frame worked of a pitch of 45° to 60°, covered in with $\frac{3}{4}$″ tongued and grooved planking, and corrugated iron ornamented with cast iron galvanized crestings, with wrought iron bannerets and finials painted maroon, with points oil-gilded. The flat roof over corridors and porch consist of thin slabs of Porebunder stone, with concrete and Portland cement over teak joists. The floors are Minton's plain tiles throughout. The work is just completed. There is also a detached building in plan 3 sides of a rectangle, containing 9 rooms (each 10′ × 10′), with a veranda all round 5′ wide.

Sanctioned amount for 1865-66 ..... Rs. 43,890
Expenditure in 1865-66 ..... „ 43,880

Constructing Drains in the compound of the Jamsetjee Jejeebhoy Hospital.

170. 935 running feet of covered slab drain 12″ × 15″ have been constructed in the Hospital compound to drain off waste water from the privies, cookhouses, &c. into the street sewer.

The work was let by contract, and has been completed.

Sanctioned amount for 1865-66 ..... Rs. 6,610
Expended in 1865-66 ..... „ 5,140

171. 605½ running feet, partly 2″ and partly 1½″ of wrought iron, and 974 running feet of lead service pipe, varying from 1″ to ½″, have been laid on to supply water to the Hospital premises.

Laying on Vehar Water to the European General Hospital in Fort George.

Sanctioned amount for 1865-66 .... Rs. 1,780
Expended in 1865-66 ..... „ 1,360

Making additions and alterations to the Officers' Quarters at Fort George for accommodating the Medical Officers of the European General Hospital, and also to the Soldiers' Barrack to convert it into an Hospital, and laying on Vehar Water to the new General Hospital.

171A. The additions and alterations to the officers' quarters have been completed, and the work in the barrack-room just commenced.

Sanctioned for 1865-66 ..... Rs. 19,790
Expended in 1865-66 ..... „ 2,460

172. *Aden.*—Starving poor have been employed on levelling Tawell avalley, and excavating 2 channels to carry off the rain-water that descends from the hills after heavy rain.

Famine Relief Works.

Sanctioned for 1865-66 ..... Rs. 21,510
Expended in 1865-66 ..... „ 21,510

173. The sides of the channels excavated by the starving poor have been pitched with stone, and masonry bunds in the beds of the channels constructed every 30 feet. Work is completed, and was commenced this year.

Pitching the sides of Channels in Tawella Valley.

Sanctioned for 1865-66 ..... Rs. 7,260
Expended in 1865-66 ..... „ 4,690

174. *Surat.*—Varnished teak venetian shutters, with brass fixtures and fastenings. Work completed.

Cawasjee Jehangeer Hospital, inserting Venetian Windows.

Allotment for 1865-66 ..... Rs. 2,000
Expended in 1865-66 ..... „ 2,000

175. *Poona.*—The walls are ready for the roofing, which has lately arrived from England. The building was commenced in the year 1863.

David Sassoon Hospital.

Allotment ..... Rs. 1,50,000
Expended in 1865-66 ..... „ 82,292

Palisade enclosure to the Building used as a Lunatic Asylum.

176. Completed.

Allotment for 1865-66 ..... Rs. 674
Expended in 1865-66 ..... „ 30

Alterations to Camp Residency.

177. *Aden.*—Commenced and completed this official year.

Expended in 1865-66 ..... Rs. 5,770
Sanctioned for 1865-66 ..... „ 5,700

ECCLESIASTICAL.

Burialground in Holkat's Bay.

178. Commenced and carried out this year.

Sanctioned for 1865-66 ..... Rs. 5,450
Expended in 1865-66 ..... „ 5,150

179. *Surat.*—The old covering of flat tiles has been removed from the roof, and corrugated iron sheets substituted. The planking underneath has been repaired, and the whole of the woodwork of the roof varnished inside. Work completed.

Providing iron corrugated sheets to the roof of the English Church at Broach.

Allotment for 1865-66 ..... Rs. 1,155
Expended in 1865-66 ..... „ 1,244
Excess.... Rs. 89

Wall to a Burialground at Bhosawul.

180. *Khandeish.*—Is three-fourths finished. Rs. 5,558 have been spent on it in the year.

Wall to a Burialground at Dhurrungaum.

181. Is more than half finished. Rs. 1,905 have been spent during the year.

Church.

182. *Kirkee.*—Walls built to an average height of 4 feet. The work has been suspended pending sanction to a revised plan which Mr. Paris has been called on to prepare.

Allotment ..... Rs. 55,490
Expended in 1865-66 ..... „ 6,441

Roman Catholic Chapel.

183. Built up to plinth. Suspended pending sanction to revised plan.

Allotment ..... Rs. 10,978
Expended in 1865-66 ..... „ 316

St. Paul's Church.

184. *Poona.*—Completed to the roof line.

Allotment ..... Rs. 28,793
Expended in 1865-66 ..... „ 43,064

Additions and alterations to Chapel at Ghorepooree.

185. Completed.

Allotment ..... Rs. 5,855
Expended ..... „ 5,855

Enclosing new Burialground with wall, and connecting the same by road with Deadhouse, Ghorepooree.

186. Completed.

Allotment ..... Rs. 1,323
Expenditure in 1865-66 ..... „ 613

Church at Poorundhur.

187. *Poona District.*—Ornamental woodwork for trusses and ornamental iron ridging for the roof has been fixed. Completed.

Allotment ..... Rs. 1,582
Expenditure in 1865-66 ..... „ 1,581

Replacing zinc tiled roof of Kundalla Church by corrugated iron one.

188. Materials have been collected.

Allotment ..... Rs. 2,275
Expenditure in 1865-66 ..... ,, 864

189. *Belgaum.*—Superstructure three-fourths ready. The Church is intended to afford 700 sittings; it was first commenced in the year 1857, but little work effected until the year under review; it has been found necessary to revise the estimate.

Church in the Cantonment of Belgaum.

Allotment ..... Rs. 26,675
Expenditure in 1865-66 ..... ,, 20,246

JUDICIAL.

190. *Bombay.*—The upper story consists of four wards, the two centre ones are to be 12′ 4½″ × 12′ × 11′, and those at the two ends 13′ 7½″ × 12′ × 11′ and 17′ 7½″ × 12′ × 11′ respectively, interior dimensions, with a closed veranda in front and rear, 8′ 3″ wide. The front and rear veranda walls are to be supported on teak beams resting on cutstone pillars 2′ × 2′ × 10′ high. The work has been given in contract. The joists of the main rooms have been put up, and the roof timber is being prepared.

Adding an upper story, and making certain alterations and additions to the ground-floor of Female Prisoners' Cells in the County Jail.

Sanctioned for 1865-66 ..... Rs. 7,000
Expended in 1865-66 ..... ,, 7,000

191. There being no separate bath and privy accommodation for European and Native prisoners, nine bathrooms and four privies have been added to the criminal and civil sides of the

Providing additional Bathrooms and Privy accommodation, and laying on the Vehar Water to all the Bathrooms in the County Jail.

Jail. 1458 running feet lead service pipes have also been laid on to all the bathrooms and privies.

Allotment for 1865-66 ..... Rs. 5,610
Expended in 1865-66 ..... „ 4,550

Enclosing the ground on the North side of the House of Correction.

192. The open ground on the north of the House of Correction is proposed to be enclosed with a rubble masonry wall 11′ high above the ground, to admit of the employment of convicts in breaking stones for road metal. The wall has been raised to a height of 4½′ above the plinth.

Sanctioned ..... Rs. 5,000
Expended in 1865-66 ..... „ 4,880

Lock-up and Guard-room for Europeans at Bhosawul.

193. *Khandeish.*—This building has been completed, and during the year Rs. 2,335 were spent; some slight additions and alterations have been found necessary, and some further ones will probably be required.

Certain Police Stations in the Ahmedabad Collectorate.

194. *Ahmedabad.*—The undermentioned stations have been completed, viz. at Surkej, Beyud, Sanund, Dholka, and stables at Dholka.

Estimate ..... Rs. 7,559 0 0
Sanctioned in 1865-66 ..... „ 4,561 0 0
Expenditure ..... „ 4,577 5 10

Police Stations at Morassa and Sanund.

195. Work in forward state; will be completed by end of June. Rs. 2,894 provided in budget for 1866-67.

Estimate ..... Rs. 11,298 0 0
Sanction in 1865-66 ..... „ 8,249 0 0
Expenditure ..... „ 8,569 12 8

196. *Northern Concan.*—
Police Station at Mullianee. Foundations completed; plinth in course of construction.

Allotment for 1865-66 ..... Rs. 2,735
Expended in 1865-66 ..... „ 641

Balance unexpended.... Rs. 2,094

Police Station at Sunjan. 197. Foundation excavated.

Allotment for 1865-66 ..... Rs. 2,735
Expended in 1865-66 ..... „ 390

Balance unexpended.... Rs. 2,345

198. Foundation and plinth completed. Superstructure nearly finished. Woodwork of doors, windows, and roof is being prepared at Tanna. The roof will be put on before the rains set in.
Police Station at Chouk.

Allotment for 1865-66..... Rs. 5,868
Expended in 1865-66 ..... „ 4,897

Balance unexpended.... Rs. 971

199. Foundations, plinth, and superstructure finished, woodwork of the roof nearly ready, and will be put on before the setting in of the monsoon.
Police Station at Campoolee.

Allotment for 1865-66 ..... Rs. 5,868
Expended in 1865-66 ..... „ 4,335

Balance unexpended .... Rs. 1,533

200. Foundations, plinth, and superstructure finished, woodwork nearly ready, roof expected to be put on before the setting in of the monsoon.
Police Station at Oorun.

Allotment for 1865-66 ..... Rs. 5,868
Expended during 1865-66 ..... „ 5,512

Balance unexpended .... Rs. 356

Police Station at Warra.

201. Woodwork being prepared in Tanna.

Allotment for 1865-66..... Rs. 5,868
Expended in 1865-66 ..... „ 540

Balance unexpended .... Rs. 5,328

Police Station at Wassind.

202. Foundations and plinth finished, and the superstructure nearly so. Woodwork about half finished.

Allotment for 1865-66.... ..... Rs. 3,627
Expended in 1865-66 ..... „ 2,167

Balance unexpended .... Rs. 1,460

Police Station at Manickpoor.

203. The whole superstructure raised and the roof put on; chunam plaster to walls laid. Completed.

Allotment for 1865-66..... Rs. 1,939
Expended in 1865-66 ..... „ 1,939

Police Station at Nowlee.

204. The whole of the superstructure raised; roof nearly ready.

Allotment for 1865-66 ..... Rs. 1,925
Expended in 1865-66 ..... „ 1,048

Balance unexpended.... Rs. 877

Police Station at Boysur.

205. The whole of the superstructure has been finished and roof put on.

Allotment for 1865-66 ..... Rs. 2,105
Expended in 1865-66 ..... „ 1,463

Balance unexpended.... Rs. 642

Police Station at Verar.

206. Foundations, plinth, and superstructure completed; woodwork of roof nearly ready.

Allotment for 1865-66 ..... Rs. 1,540
Expended in 1865-66 ..... „ 789

Balance unexpended.... Rs. 751

Constructing Police Lines at Bulsar.

207. Foundations and plinth completed. Superstructure nearly completed. Doors, windows, and woodwork of roofs all ready, and roof fixing commenced.

Allotment for 1865-66 ..... Rs. 13,466
Expended in 1865-66 ..... „ 10,380

Balance unexpended.... Rs. 3,086

Alterations and additions to City Jail.

208. *Poona.*—Completed.

Allotment ..... Rs. 1,712
Expended in 1865-66 ..... „ 1,429

Police Lines at Carwar.

209. *Canara.*—Completed. The block of buildings consists of the following:—

9 pendalls for sepoys.
2 ditto for native non-commissioned officers.
1 quarter for native commandant.
1 hospital.
1 quarter for hospital assistant.
1 quarter-guard.
1 magazine.

Police Pendalls at Sholapoor.

210. *Sholapoor.*—One block has been completed and a portion of another.

Allotment..... Rs. 7,193
Expended in 1865-66..... „ 4,959

Temporary quarters for Judge's Establishment at Carwar.

211. *Canara.*—Completed.

Temporary Jail at Carwar.

212. Completed.

Temporary Residence for the Judge at Carwar.

213. A wooden building, purchased in Bombay, of American design, and composed of American pine and dealwood, has been put up at Carwar, but the material is not well suited for a locality abounding in white ants; its original cost has been excessive, and before it is ready for occupation the expenditure will equal what would have been needed for a permanent bungalow. A residence was, however, required to be immediately supplied, hence the necessity for the purchase.

Courts for Moonsiffs at Halla and Hydrabad in the Hydrabad Collectorate, and Larkhana in the Shikarpoor Collectorate.

214. *Sind.*—*Have been constructed from Court funds at an aggregate cost* of Rs. 8,552.

Lines for 100 Rural Police at Shikarpoor.

215. *Shikarpoor.*—Have been nearly completed, and considerable alterations and improvements made to the Shikarpoor Jail at a cost of Rs. 6,348.

EDUCATIONAL.

Elphinstone College.

216. *Bombay.*—The ground floor of the Elphinstone College has been completed, with the exception of the angle but-

tresses front and rear windows in wings, and the end corridors, which are two-thirds completed.''

Allotment for 1865-66 ....Rs. 2,00,000
Expended in 1865-66..... ,, 1,47,510

Constructing a Training School at Ahmedabad, contributed by Mr. Premchund.

217. *Ahmedabad.*—The site has been paid for, material collected, and the foundation benches excavated. Rs. 50,000 have been provided in the budget for 1866-67.

Estimate..... Rs. 76,366 0 0
Sanctioned in 1865-66..... ,, 34,000 0 0
Expenditure ..... ,, 35,333 11 4

Constructing School House for 200 Boys at Unklesur.

218. *Surat.*—Foundations excavated and filled in, plinth raised, superstructure completed. All frames of doors and windows fixed, and half of the roof put up.

Allotment for 1865-66 ..... Rs. 9,212
Expended in 1865-66 ..... ,, 6,048

Balance....Rs. 3,164

Constructing School House for 200 Boys at Bulsar.

219. Superstructure complete. Doors, windows, and all woodwork of the roof ready for fixing.

Allotment for 1865-66 ..... Rs. 9,212
Expended in 1865-66 ..... ,, 4,536

Balance....Rs. 4,676

Constructing School House for 150 Boys at Kuttargaum.

220. Work completed;

Allotment for 1865-66.....	Rs.	6,633
Expended in 1865-66	,,	6,883
Excess	Rs.	250

Constructing School House for 150 Boys at Chicklee.

221. Foundations and plinth finished; superstructure in progress; woodwork ready.

Allotment for 1865-66	Rs.	6,633
Expended in 1865-66	,,	2,507
Balance	Rs.	4,126

Constructing School House for 150 Boys at Mandvee.

222. Foundation, plinth, and superstructure completed; doors and window frames fixed; sashes made, but not fixed; roofing completed; chunam flooring and colour-washing in progress.

Allotment for 1865-66.....	Rs.	6,633
Expended in 1865-66	,,	6,662
Excess.....	Rs.	29

Constructing School House for 100 Boys at Oolpar.

223. Foundation, plinth, and superstructure completed; doors and window frames fixed; sashes made but not fixed; roofing completed, chunam flooring and colour-washing in progress.

Allotment for 1865-66.....	Rs.	4,872
Expended in 1865-66	,,	4,727
Balance...	Rs.	145

224. Foundation, plinth, and superstructure completed; doors and window frames fixed; sashes made, but not fixed; roofing completed; chunam flooring and colour-washing in progress.

Constructing School House for 75 Boys at Elao.

Allotment for 1865-66..... ...	Rs.	3,343
Expended in 1865-66..	,,	3,273
Balance....	Rs.	70

225. Foundations excavated and filled in, plinth raised, two-thirds superstructure run up; all frames of doors and windows fixed; sashes and woodwork of roof ready.

Constructing School House for 75 Boys at Dewa.

Allotment for 1865-66	Rs.	3,343
Expended in 1865-66	,,	1,924
Balance....	Rs.	1,419

226. Foundation, plinth, and superstructure completed; roofing in progress; doors and window frames fixed, and sashes ready.

Constructing School House for 75 Boys at Jeelalpore.

Allotment for 1865-66	Rs.	3,343
Expended in 1865-66	,,	2,729
Balance....	Rs.	614

227. Foundations excavated and filled in, plinth raised, nearly half superstructure run up, 4 frames of doors and 2 of windows fixed, woodwork of roof in progress.

Constructing School House at Kutpore.

Allotment for 1865-66	Rs.	3,343
Expended in 1865-66	,,	1,478
Balance	Rs.	1,865

Constructing School House at Hansote.

228. Foundations filled in, plinth and two-thirds of superstructure run up; woodwork in progress.

Allotment for 1865-66	Rs.	3,343
Expended in 1865-66	,,	1,924
Balance....	Rs.	1,419

Constructing School House at Jumboosur for 150 Boys.

229. Work completed with the exception of a few trifling items.

Allotment for 1865-66	Rs.	6,633
Expended in 1865-66	,,	6,511
Balance....	Rs.	122

Constructing School House at Tankaria Sitpore for 150 Boys.

230. Foundations filled in, plinth raised, and superstructure nearly completed; doors and windows and woodwork of roof prepared.

Allotment for 1865-66	Rs.	6,633
Expended in 1865-66	,,	3,116
Balance....	Rs.	3,517

Constructing School House at Kerwara for 75 Boys.

231. Foundations filled in, plinth raised, and superstructure nearly completed; doors and windows and woodwork of roof prepared.

Allotment for 1865-66	Rs.	3,343
Expended in 1865-66	„	1,855
Balance....	Rs.	1,488

Building for Deccan College.

232. *Poona.*—Ground floor completed; first floor about half finished (*vide* last year's report).

Allotment	Rs.	1,50,000
Expended in 1865-66	„	34,726

Engineering College.

233. Built up to the first floor. Designs furnished by Mr. Trubshawe, but arrived too late to admit of their being carried out in all their details in the first floor. A sum of Rs. 50,000 has been contributed towards the erection of this building by Mr. Cowasjee Jehangeer.

Allotment	Rs.	50,000
Expended in 1865-66	„	26,984

Ranges of Privies for Students in Vishrambag College.

234. Completed,

Allotment	Rs.	514
Expended in 1865-66	„	292

PUBLIC IMPROVEMENTS.—RECLAMATIONS.

Moody Bay Reclamation.

235. *Bombay.*—The Executive Engineer reports—

"No estimates for this design in its entirety are yet prepared, but a sum of money was granted for reclaiming a portion of the ground for a workshop.

"This work, which was partly done when I assumed charge of this appointment, I gave out in contract for a sum of Rs. 1,53,226 (a very low rate for the quantity to be done), to be completed by the 31st May 1866.

"This contract has been very honestly carried out by the contractor, at, I believe, a loss to himself, and I have already got possession of the greater part of the land. It will, I think, be completed before the time.

"On the land above reclaimed, which I have taken charge of, I have commenced erecting buildings for stores and worksheds during the monsoon, to prepare for next season's work.

"I have also purchased some machinery and timber which will be required for work during the monsoon. Against the item 'Moody Bay Reclamation' I have drawn altogether a sum of Rs. 2,40,286."

236. The Executive Engineer reports—

Apollo Bay Reclamation.

"I only assumed charge of this work in March 1866, since which time every exertion has been made to push on with that portion of the reclamation required for the B. B. and C. I. Railway Station. This portion, however, I found to be the most backward of the work, and so little of the masonry work was done, especially at the seaface or exposed end, that I have not made as much progress as I could have wished.

"The walling is, however, well in hand now, and I hope to get the Railway Station ready to hand over before the end of next year.

"The work was given in contract by Captain Fuller before I came, and the contractors have done their work well."

Estimated cost	Rs.	17,96,300
Allotment for 1865-66	,,	3,35,000
Expended in 1865-66	,,	3,30,150

MUNICIPAL.

237. *Bombay.*—The road from the Central Station to Worlee is 7,411 feet in length, and that from the same station to Mahaluxmee is 5,598 feet in length. The earthworks were first thrown up to an average of 3½ feet in height, sufficient to clear the floods, and an extra 3½ feet have been added at the expense of the Municipality (Government advancing the funds) in order to bring the surface up to 2 feet below extreme high-water mark. The work has been completed.

Forar Roads.

Estimated amount	Rs.	4,66,690
Expended in 1864-65	,,	3,77,250
Ditto 1865-66	,,	74,680
Total Expenditure....	Rs.	4,51,930
Sanctioned amount for 1865-66	Rs.	89,440

Clearing Tank opposite St. Mary's Church.

238. *Poona.*—Completed.

Allotment	Rs.	4,178
Expenditure in 1865-66	,,	1,238

Improvement to Yenna Lake at Mahableshwur.

239. *Sattara.*—The object of the work is to stop extensive leakage which threatened to destroy the bund.

Expended in 1865-66	Rs.	3,410

MARINE.

Constructing a Cofferdam at the lower end of the Bombay Dock.

240. *Bombay.*—The gate spindles and the iron traversing plates having been broken and displaced, it was found necessary to construct a cofferdam to admit of the repairs to the gates and docks being carried out. The dam consists of double rows of piles planked from inside by 1½″ jungle planks and four sets of longitudinal waling connected together with iron bolts. The whole structure has been strengthened by cross beams from inside and supported by struts from outside. The space between the inner planking has been filled in with stiff puddle brought from the adjacent creeks. On closing the sluices on the 15th March 1866 the sea forced out some of the horizontal planks at the bottom. Vertical piles were then driven flush with the outer waling, and the space between the planking and the new piles was filled in with puddle.

The sluices were again shut on the 29th April 1866. As soon as mud is removed from the lower end of the Dock the renewal of the traverse plates and the stone pavement, as also the resetting of the brass sockets which receive the spindles, will be commenced.

Estimated amount.....	....Rs.	17,236
Sanctioned for 1865-66	,,	10,433
Expended in 1865-66	,,	10,433

Constructing two new Boat Sheds in the Dockyard.

241. The old roofs having fallen down during the last monsoon, two contiguous sheds with sloping roofs, one 180′ × 44′, and the other 180′ × 26′ and 17′8″ in mean height, have been constructed. The roof is sup-

ported on round sotta posts, built in masonry footing 3′ × 3′ × 7′, and consists of teakwood trusses, round rafters, teak battens, and double tiles. The whole of the work has been completed.

Sanctioned ..... Rs. 25,810
Expended in 1865-66..... „ 26,100

242. *Adén.*—Completed, except fixing the light, which has not yet been received; the tower and outhouses have been carried out this year.

Lighthouse on Marshag.

Sanctioned for 1865-66 ..... Rs. 24,040
Expended in 1865-66 .... „ 23,730

243. *Northern Concan.*—The bunder and the sides were carried out this year, the former to a length 200 feet and the latter 150 feet; about half of the work completed.

Bunder at Karanja? Local Funds.

Allotment for 1865-66 .... Rs. 20,000
Expended in 1865-66..... „ 8,099

Balance unexpended ... Rs. 11,901

244. Embankment over a length of about ½ mile, dry stone pitching about ¼ mile executed, and wood, with the exception of piles, purchased. Embankment completed to within 500 feet of the proposed bunder.

Bunder at Rewas. Bombay 1 per Cent. Income Tax.

Allotment for 1865-66 ..... Rs. 63,481
Expended in 1865-66..... „ 21,062

Balance unexpended.... Rs. 42,419

245. Work commenced in February 1866. About 900 feet of roadway filled, in and dry rubble pitching for the sea face to the same length completed. Masonry work of bunder consisting of ashlar stone and lime carried to a length of about 80 feet. About one-tenth of the work completed.

Bunder at Mora. Conkan Ports Dues Fund.

Allotment for 1865-66	Rs.	35,000
Expended in 1865-66	,,	6,655
Balance unexpended....	Rs.	28,345

246. *Ahmedabad.*—This work will be completed as the monsoon sets in.

Constructing a Pile Shield to protect the Gogo Bunder from the rush of water from the Bhoomlee Nulla. Cambay Port Fund.

Sanction for 1865-66	Rs.	794	0 0
Expenditure in 1865-66	,,	457	0 5

247. *Surat.*—Foundations and plinth of kullasees' quarters finished; a few stones for spiral stair quarried and cut; bricks prepared for the whole work. Existing light mast taken down and re-erected at a short distance off.

Erecting a Lighthouse at Vaux's Tomb at the mouth of the Taptee Creek. Cambay Port Fund.

Allotment for 1865-66	Rs.	7,553
Expended in 1865-66	,,	596
Balance....	Rs.	6,957

248. *Northern Concan.*—Not commenced. Materials collected at site.

Constructing a new Light Beacon at Trombay. Conkan Ports Dues Fund.

Allotment for 1865-66.....	Rs.	1,706
Expended in 1865-66	„	626
Balance unexpended	Rs.	1,080

Wharf Wall, Harbour Works, Carwar.

249. *Canara.*—The total length of this wall, now completed as designed, is 897′, and affords more than ample accommodation for the present wants of the port; it is only a matter of regret that with all its facilities for landing and shipping goods, Carwar does not yet show any signs of commercial activity. Coompta, although it has no claim to a harbour, either natural or artificial, is still adhered to by the native merchants, who are unwilling to leave it, although it must be apparent to them that Carwar would be more advantageous in many ways. The works under this head of the Harbour Works Estimate have been stopped, as sufficient has already been done for the present wants of the place, and it will be time enough when trade is drawn here to complete the wharf wall to the length originally intended, viz. 1,800 feet.

Wharf Road, Harbour Works, Carwar.

250. This road, which connects the Arbyle Ghaut and Kyga Ghaut roads between Beytkul and Kohay, was originally intended to be 100 feet wide throughout, but in consequence of the works being stopped its general average does not at present exceed 73 feet. In the Bay at Alliguddy a sea-wall with a slope of one to one has been built on the sea face, but there still remains a length of about 350 feet which requires to be properly built to ensure the safety of the road; this length was only finished in a temporary manner. In addition to the above, timber groynes have been erected at right angles to the sea-wall to break the force of the sea, and to cause a deposit of sand to

be thrown up in front of them; these have answered their purpose very well.

Lighthouse on the Oyster Rock at Carwar.

251. This is without doubt the most important, as it is the most interesting work yet completed in this charge, and was brought to a close, with the detached quarters for a light keeper, before the close of the official year. The light was first exhibited on the 26th March, and has been continuously lighted since. The column having been built to a height of 40′ in the previous year, it only remained to add the cornice and cover in the top of the column for the reception of the lantern. This was done by building a dome, semicircular in section, and in which a circular opening had to be left for admission to the light room above. A Dioptric Light apparatus of the 1st order was then fixed, under the special superintendence of Mr. John Silk, a mechanic deputed by Messrs. Chance Brothers of Birmingham for the purpose, whose work was so satisfactorily performed that Government sanctioned a grant of Rs. 500 being paid him in acknowledgment of his services. The general dimensions of the column are as follows:—

Height of column, including cornice . . .	43′	
External diameter of column at base	19′	10″
Internal do. do.	9′	10″
External diameter of column below cornice .	14′	10″
Internal do. do.	9′	10″

The wall having a batter of $\frac{3}{4}$″ for foot on the outside. The summit of the Oyster Rock is 160′ above the level of the sea, the top of the column 43′ above this, and the focus of the light 10′ above the last, giving the light a total height of 213′ above the level of the sea; it should be visible at a distance of 30 miles.

Lighthouse at Rutnagherry.

252. *Rutnagherry.*—Completed, with the exception of fixing the light apparatus.

Allotment ..... Rs. 2,259
Expenditure in 1865-66 .... „ 1,739

Improvements to the Bunder at Vingorla.

253. *Belgaum.*—Completed. Local work.

Allotment..... ..... Rs. 2,974
Expenditure in 1865-66..... „ 2,074

254.—*Works*

254. *Works in charge of the Superintendent Kurrachee*

Name of Work.	Sanctioned Estimate.	
	Original.	Revised.
V.—Miscellaneous Public Improvement.	Rs.	Rs.
Works for the improvement of the Harbour of Kurrachee, consisting of—		
Keamaree Groyne ..... (Mr. Walker's Estimates.)	4,20,000*	3,63,980
Napier Mole Bridge..... (Mr. Walker's Estimates.)	4,00,000*	5,61,023
Native Jetty..... (Mr. Walker's Estimates.)	2,80,000*	4,84,246
New Channel ..... (Mr. Walker's Estimates.)	1,80,000*	7,56,241
Chinna Creek Stoppage ..... (Mr. Walker's Estimates.)	90,000*	1,98,440
East Pier..... (Mr. Walker's Estimates.)	4,00,000	1,81,500
Manora Breakwater..... (Mr. Walker's Estimates.)	11,00,000	11,92,363
Deep Water Point Removal	Not estimated for.	3,05,842
With the following works subsidiary to the above.		
Office Workshops and Storeyard .... A	Cost to be apportioned on the above.	.....
Harbour Survey ..... B	Cost to be apportioned on the above.	.....
Plant, Tools, and Stores C	Cost to be apportioned on the above.	.....
Works extra to the above project.		
Repairs to West Beach	.....	1,582
	28,70,000	40,45,217
II.—Civil Buildings.		
Buildings for Anglo-Indian Telegraph at Manora.....	16,220	.....
Filling Plot at Upper Bunder for Customs Department	14,111	.....

Harbour Works during the year ending 30th April 1866.

Expended in 1865-66.	Total Expenditure up to 30th April 1866, as shown in Accounts.	Total Expenditure with cost of items A B C apportioned and deduction for value of Plant. (C).	Remarks.
Rs.	Rs.	Rs.	* Mr. Parkes disclaims on the part of the late Mr. Walker and himself any responsibility in the excess of expenditure over these estimates for reasons detailed in reports made 21st March and 28th October 1863.
1,311	3,06,603	3,63,846	
516	4,73,177	5,61,527	† The revised estimate for the new channel includes Rs. 2,24,301 estimated value of land made for Government with the excavated material. Of this the land made up to the present is valued at Rs. 1,75,515, which forms part of the expenditure to date. For this no credit has been allowed to the Harbour Works, though the land could have been sold for the amount so valued or more if it had not been considered necessary by the local authorities to reserve it for Government purposes.
67,200	4,25,992	5,05,556	
54,962	5,86,072	6,62,657†	
350	1,41,694	1,68,145	
46,391	1,76,635	2,09,630‡	
125	5,242	6,339	
21,224	21,809	26,871	
998	A 44,054	.....	
2,284	B 11,333	.....	
21,409	C 6,18,464	.....	
....	1,582	1,582	‡ The amount of revised estimate for East Pier and expenditure to date includes only the portion recommended in Mr. Parkes' report of 15th March 1864.
2,16,770	28,12,657	25,06,153	The amounts entered in last column are the same as those shown in the statement that accompanied the report of the Committee on Kurrachee Harbour Works, less expenditure for May.
16,240	16,240	.....	
14,111	14,111	.....	
2,47,121	28,43,008	.....	

Keamaree Groyne.

255. This work stands as when last reported on.

The expenditure during the year consists of charges for removal of pier on Deep Water Point, and railroad to it from quarry at Manora, and apportionment of materials from stock issued to the work during the previous year.

Napier Mole Bridge.

256. This work stands as reported on last year, having continued open for traffic; and the slopes of the approaches only remaining to be completed which, as formerly explained, they cannot be until the removal of the temporary embankment east of the bridge on which the Sind Railway line runs to Keamaree.

This is to be maintained until the time arrives for the diversion of the Chinna Creek waters. Orders were received in January last to proceed with the removal of the portion of the Napier Mole opposite the bridge whenever convenient, but not to remove the embankment above referred to until further orders.

A proposition has been consequently made to the Municipality for filling in a plot of ground near the Muchee Meanee with the material to be obtained in the removal of the Mole, and pending their decision* the work has been deferred.

* The offer has since been accepted, and the work will be proceeded with.

Work executed during the year :—

Removing temporay approach to bridge, and depositing material for filling Native Jetty	35,000 cubic feet.
Cutting through the Mole in line of Native Jetty south wall cofferdam.	12,043 „

A proportion of the cost of these works was charged to Native Jetty.

257. At the date of last report a length of 300 feet of the south Jetty wall had been thrown open to the public, and the remainder of that wall was in different stages of progress. During the past year the entire work was completed, and (with the exception of the length of 31 feet adjoining the bridge intercepted by the mole, which is about to be removed) has been thrown open to the public, making altogether 3,325 feet of convenient and roomy wharfage.

Native Jetty.

North wall	1,070 feet.
West wall	300 ,,
South-west wall	36½ ,,
South wall	1,369 ,,
Total....	2,775½ ,,
Quay wall near Napier Obelisk	550 ,,
Total....	3,325½ ,,

in lieu of 1,400 feet of the confined mole wharf.

The walls of the Jetty have all stood well without settlement; thus, as described in former annual reports, justifying the various modes adopted in dealing with the difficult and varying strata of the site.

The Jetty only requires some lock-up sheds and a few handy cranes (for which estimates are in hand at the request of the Commissioner in Sind, on the recommendation of the Collector of Customs) to make it in every way highly convenient for the lighterage trade and native craft frequenting the port. At the same time the wants of the Sind Railway Company will be met, when their communication with Keamaree shall have been cut off, by the permission which they have obtained to extend their line to a portion of the south wall of the Jetty.

Work executed during the year:—

Random rubble masonry in superstructure and in foundation for mooring posts	86,290	cub. feet.
Rough ashlar in footings	5,017	„
Ashlar in coping, steps, and blocks ..	2,770	„
Hydraulic concrete	12,000	„
Driving piles for cofferdam.....	495	Nos.
Earthwork in filling of native jetty.	89,360	cub. feet.
Metalling	152,954	„
Excavation inside cofferdam for foundation.....	106,300	„

Also unwatering foundations by steam power and apportionment of stone and materials.

New Channel.

258. The excavation of the portion west of the Napier Mole Bridge was completed so far as to allow of the dredging operations being suspended on the 22nd October 1865.

The excavation of the portion east of the bridge has been continued, and is now nearly completed so far as it seems advisable to carry the excavation until the action of the tidal scour is brought into play by the opening of the bridge.

The excavated material has been used as before for reclaiming ground adjoining the Harbour both at Keamaree and Kurrachee to the extent altogether, from the commencement, of 56½ acres, of which 20½ acres were filled in for the Customs department, Municipality, and private parties, who paid for the work Rs. 1,12,387 to the Harbour Works; the remainder of the land filled in belongs to Government, and no credit has been allowed for it to the Harbour Works, though valued at Rs. 1,75,515—say one and three-quarter lakhs.

Works executed during the year:—

Excavated from east of Mole.... 506,152 cubic feet.
Ditto west of Mole.... 736,536 ,, ,,

and dry rubble stone pitching to slopes of reclaimed ground to the extent of 16,875 superficial feet.

Expenditure shown in the statement includes charges for thorough repairs of two dredges and twelve mud punts, taking down of the cranes erected at Keamaree for the landing of materials from new channel, and apportionment of materials and other stores.

Chinna Creek Stoppage.

259. This work stands as reported on last year, the suspension of operations having continued. The staging and embankment will require some repairs before long to maintain them, and should the completion of the work be long delayed the expense will be proportionately increased.

East Pier.

260. This work was completed, as reported to Government, on the 27th November 1865, and suffered no injury during the monsoon, which was, however, unusually light; at the same time the work seems likely to withstand any sea which it is likely to encounter.

The Railway line has been kept up with a view to strengthen the pier, should this prove necessary in the course of the ensuing monsoon.

Work executed during the year: 13,895 tons of stone tipped from boats and waggons. The expenditure includes amount paid to Sind Railway Company for depreciation and use of their permanent way for the previous year, and apportionment of stone and repairs of stone trucks.

Manora Breakwater.

261. No orders have been received to proceed with this work; the approach stands as reported on last year, also sanction has been allowed to the preparation of experimental concrete blocks, which is in progress, and to the deputation of Lieutenant Merewether, R.E., Executive Engineer, to seek along the coast of Malabar for stone of a durable nature and large size for the more exposed portion of the work.

Removal of Deep Water Point.

262. As anticipated in the last report, the waves and scour during last monsoon acted strongly on Deep Water Point, so much so that it has been found requisite, under the sanction of Government, to proceed with the removal of the Port Department godowns, pier, and other buildings to a safe position within the line of shore which it is proposed to maintain.

This work is now in progress, and an embankment of rough large blocks of Manora conglomerate is being formed along the proposed shore line.

The scour of last monsoon has laid bare a considerable shelf of conglomerate on the south-east face of the Point, the existence of which was previously unknown; a portion of this has been removed by submarine blasting during the past year, and its entire removal will not be difficult when the proper time arrives, bearing in mind that the shelter afforded by the Point to the anchorage above must be at least partially maintained until the mouth of the Harbour shall have been protected by the Manora Breakwater.

Revised estimates for the removal of the Point are in preparation; it is expected that they will amount to a sum not exceeding (probably somewhat within) the estimate formerly submitted, in which provision was made for the

removal of the sand forming the bulk of the Point by artificial means, a course which the strong action of the tidal scour promises to render unnecessary.

AGRICULTURAL.

263. *Kaira.*—This large and important survey has been in progress since November. It is under the superintendence of Lieutenant Baldwin, R.E. It will be completed before the monsoon.

Sandeysur Drainage Survey.

Budget estimate	Rs.	2,188
Actual expenditure	,,	1,468
Balance	Rs.	720

264. *Ahmedabad.*—The surveys have been completed, and plan and estimate made; the project will entail an expenditure of some Rs. 40,000.

Surveying for a project for filling the Tankaria and Chundoola Tanks from the Kharee River.

Sanction	Rs.	420	0	0
Expenditure	,,	201	7	6

265. *Sholapoor.*—The work has been completed.

Improvement to Koregaum Tank.

Allotment	Rs.	5,000
Expenditure in 1865-66	,,	4,831

266. *Belgaum.*—A portion of the earthen bund has been raised with stone pitching in front. Completed. Debitable to Local Funds.

Improvement to Tank near Belgaum Fort.

Allotment	Rs.	5,000
Expenditure in 1865-66	,,	4,531

IRRIGATION.

Sukkur and Shadadpoor Canal.

267. The excavation has been carried on the 12th mile up to the end of the 17th mile. Beyond this work has been stopped for the present pending the preparation of fresh plans embodying some important modifications lately decided on by Lieutenant-Colonel Fife. These involve a change in the ulterior course of the canal from that previously designed and estimated for. In consequence of all excavation being confined within five miles of the line of canal the expenditure during the year has only amounted to Rs. 87,879. Considerable progress has been made, however, in the head works. The position of the regulating bridge has been fixed at about 200 feet out from the river bank, where there is seldom less than 4 feet of water at the low season. In this spot a strong cofferdam has been constructed, and the foundations of two piers and an abutment with intermediate paving fixed on solid rock at a depth of 3 feet below the bed of the river. Iron gates and regulating apparatus have been ordered from England. About 200 running feet of the foundations of the river wall to connect the present river bank with the bridge have been laid in the river bed. The Acting Executive Engineer reports that preparations are being made to enable the works to proceed during the inundation by raising the dam to a height of 17 feet above the bed of the Indus.

Mitrow Canal.

268. Water was admitted to the 74th mile during the past season, and the canal has been opened out to the full width to the end of the 80th mile. It has also been widened between the 9th and 25th, the 37th and 43rd, the 60th and 63rd, and between the 69th and 74th miles. From the flood caused by the very heavy rainfall in August 1865 a considerable quantity of the spoil bank on the west side was

washed into the canal, and formed a deposit varying from 1½ to 3 feet in depth. The greater part of this will be cleared away before the water is let into the canal. The branch towards Sumara from the 57th mile of the canal has been opened out to the 6th mile. A masonry regulating bridge at the 60th mile and two road bridges have been completed. Ten masonry heads to distributing channels have been constructed, and several others will be ready for use this season. The expenditure during the year on the Mitrow Canal amounts to Rs. 66,027.

Thurr Canal.

269. The main canal has been extended to full width to the end of the 12th mile. A double regulating bridge at the head of the Oomurkote branch has been completed; the bridge over the branch consisting of 2 spans of 12 feet each, and that over the main canal of 2 spans of 10 feet each. A tail sluice bridge of 10 feet span has also been built and regulating and road bridges at the 6th and 11th miles are in progress. The expenditure during the year amounts to Rupees 42,196. Lieutenant Cruickshank, Acting Executive Engineer Mitrow Canal, regrets that the strength of the muster of convict labour which afforded such valuable aid in the working season 1864-65 on the Mitrow and Thurr Canals has been reduced (owing to the great sickness which broke out in the fall of last year) to 140 men. This has had a serious effect on the progress of the works, as free labour is very scarce, and obtained with much difficulty in the Narra districts.

Cuts in the bed of the Narra.

270. Owing to the water coming down the supply channel from Rohree at an earlier date than was expected the excavation in the bed of the Narra was stopped before the end of May 1865, and owing to the quantity of water in the Narra this year operations could

not be resumed until the 12th March last. It is expected that the remainder of the obstructions below Kipra, 1½ miles in length, will be cut through to a breadth of 45 feet, and that a channel 30 feet in width will be cut from Bhaitee-ka-Bhit to the low ground at Marooee, beyond which point to the Kilankur Dund nearly the whole of the excavation has been finished. The expenditure during the year amounts to Rs. 9,930.

Canal Clearances and Improvements in Sind.

271. The usual canal clearances have been carried out in the Kurrachee, Hydrabad, and Shikarpoor Collectorates. From the assignment of Rs. 34,058 in the Local Fund Budget of the year, to supplement the Imperial grant, the full amount was expended on the clearance of canals, maintenance of bunds, &c. throughout the province. New mouths to the Korai and Gunj Behur canals in the Roree districts of the Shikarpoor Collectorate have been executed, the sources from which they draw their supply being completely silted up. Permanent sluices at the heads of the Arthur, Naitch, and Kadur canals, drawing their supply from the Western Narra, were under construction during the year.

Dharwar Collectorate.

272. A survey has been undertaken to decide a long mooted point, viz. whether a canal from the Mulpurba River can be led to water the Dharwar districts. This survey is not as yet completed.

Belgaum Collectorate.

273. Surveys are in progress for a valuable Irrigational Project from the Gutpurba river above the Falls of Gokak. Preliminary levels were run many years ago, and a report sent in by Colonel (now Major General) Scott, R.E., which showed the great facilities for irrigation at the abovementioned point.

Sattara Collectorate. Rewadee Irrigational Canal.

274. A new channel in place of an old failure has been completed, starting from a fine dam which had been made many years ago; the work is a small one, but the water is being greedily taken up by the villagers, and though it has cost a great deal, in a few years it will pay a good profit. It was reported as completed last year, and probably should not be mentioned again, except that it has occupied a good deal of the attention of the department in keeping the channel clear and arranging for the irrigation from it.

Krishna Works.

275. The dam and head works are now nearly completed, and will be quite so before the rains. This year the dam, 2,000 feet long, has been raised to its full height, and is now being coped. A very massive wing wall on the right bank is finished. The sluice or opening left for the passage of the stream in the river has been built up. The head sluice or regulating-gate for the canal has all the arches turned, and will soon be completed. The head of the canal being in hard rock, has required a great deal of blasting, but will be ready to admit water at the commencement of the monsoon. The earthworks of the first twenty miles of the canal are completed, and all the masonry works up to the 8th mile. Those on the next mile are in a forward state, so the first nine miles will be opened for irrigation this monsoon.

Expenditure from the commencement up to 1st May 1866	Rs.	3,55,332
Expenditure in 1865-66	,,	1,81,747
Allotment for 1865-66.....	,,	2,00,000
Revised estimated amount	,,	5,69,744

Surveys and examination of Rivers.

276. Several surveys have been going on, amongst others one to see whether the waters of the Quoina could not be diverted to assist the supply of

the Krishna works, but this has been found impracticable. A supply can, however, be obtained by a storage lake on the Tarla river, a tributary of the Krishna, and a project for this is being matured. Other storage lake sites have been determined on, and projects will be prepared as soon as possible.

Municipal Works.

276A. The Municipality of Kurrar having asked this department to assist them with a project for a supply of water to their town, one has been prepared and sanctioned, and the work is in progress. The source of the supply is to be the new Krishna Canal, and a proper water rate will be paid to that work.

Poona Collectorate.

277. Elaborate plans and estimates, the latter amounting to Rs. 18,21,679, have been prepared and forwarded to Government for the supply of water to the cantonments of Poona and Kirkee and the town of Poona, for which sanction is awaited. A further very extensive project is in preparation, supplemental to the above, by which it is intended to increase the contents of the storage lake, and carry from it a canal of large size to water the Poona valley on the right bank of the Moola Moota and Bheema rivers as far as the town of Indapoor. This project involves an immense amount of labour, as the canal will be 167 miles long with masonry works in proportion. The preparation has been hindered by the want of subordinate assistance, but is now going on rapidly.

Ahmednuggur Collectorate.

278. Some repairs to irrigational works have been executed which do not require any remark.

Surveys for Irrigational Projects.

278A. Detailed plans and estimates for an irrigational work at the village of Lakh on the Prowara river have been submitted to Government, and sanction is

awaited ; also for a project at Palkheir on the Kadwa river, to which sanction has not as yet been accorded.

Amount of estimate for the Lakh project Rs. 2,11,298
Do. do. Palkheir do. .. ,, 64,924

A survey has been made for a canal from the Godavery river. The details required for making the designs for the head works and the canal (33 miles in length) on the south side are ready, and the survey of the north side is in progress. Details have also been obtained for preparing an estimate for restoring a fine old tank (at Bhatowdee) near Nuggur. It is hoped the plans and estimates for the above projects will be forwarded in time for this year's budget. A preliminary survey has been made for another project on the Prowara river, the result of which has turned out favourably, and the detailed survey will now be commenced.

279. Steps have been taken to call the attention of Government to the Ekrookh Tank project, and early sanction is hoped for.

Sholapoor Collectorate.

The amount of estimate is Rs. 9,33,511.

280. At the commencement of the official year under report a fine dam 1,550 feet in length had been completed across the river with massive regulating works for canal heads on each bank.

Khandeish Collectorate. Jamda Canal on the Girna River.

The canal on the left bank only is in course of construction.

This year a length of 10 miles has been finished. Pending the settlement of the question as to what kind of outlet or module should be adopted, iron pipes are being laid through the banks of the canal at convenient intervals for irrigation, and a channel cut from the outlet until the water is delivered on to the surface of the lands to be irri-

gated, after which it is understood that the villagers should make their own channels to their fields.

Beyond this 10 miles the canal is being extended rapidly, and 7 miles more, in all 17 miles, will be completed by the commencement of the approaching monsoon.

Substantial iron railings have been fitted to the regulating head on the left bank, and iron windlasses opening strong sluice-gates have also been erected, capable of keeping the water under control even during the highest flood.

Amount of revised estimate	Rs.	6,13,331
Expended from the commencement up to the end of 1864-65	,,	1,76,280
During 1865-66	,,	1,68,291
Allotment for 1865-66	,,	1,50,000
Balance to be expended	,,	2,68,758

Panjur Irrigation Scheme.

280A. The whole of this work, which consists of the improvement of an old native dam, and leading off two canals for irrigation, on the right bank three miles in length, on the left eight, with the necessary head-works, has been thoroughly completed this year, with the exception of two small regulating works, which will be built when sanction is received to the revised estimate.

Amount of revised estimate	Rs.	64,409
Expended in 1865-66	,,	8,036
Do. up to 1st May 1865	,,	55,327
Balance	,,	1,015

Repairs and Improvements.

281. Enlarging the watercourse and constructing breast walls, &c. to the Bundara of Padulda in the Sooltanpoor Talooka.

This work, which was commenced in December last, could not be completed within the official year owing to the

scarcity of labour in this part of the collectorate; it will, however, be finished by the end of June 1866.

Amount of estimate	Rs.	6,705
Expenditure	„	2,278
Balance....	Rs.	4,427

Several other minor repairs and improvements have been carried out which promise a handsome return for the outlay, but do not require mention here.

Girna Storage Lake.

282. As the features of the country through which the Girna runs, between Malligaum and the canal works at Jamda, appeared to offer great advantages for a storage lake of large capacity, elaborate contour surveys have been executed; the contours at different heights have been carried for nearly 30 miles along the valley; and three sites for the lake have been carefully investigated, the result being that the lowest of the three near the village of Sanjgaum appears to be the only practicable one. This site offers facilities not often found. The valley which will form the bed of the tank is for the most part poor land and uncultivated; one or two poor villages only will be submerged. At the point where the dam will cross the river there is hard rock not only in the bed but on each bank. A waste weir more than a quarter of a mile in length can be made, and the slope from it is gradual and terminates in a tributary river which will lead the water off some distance below the dam. The preliminary levels having thus at length terminated with a favourable result, the scheme for the storage lake will be matured as soon as possible. It will supply the Jamda Canal during the hot season, and probably also a canal of its own at a high level.

COMMUNICATIONS.

The Eastern Boulevard.

283. *Bombay.*—The Eastern Boulevard was commenced in the month of November 1865, and the work has made very good progress. The line has been cleared of obstruction, with the exception of the public necessaries and a market place, which the Municipal Commissioner has promised shortly to remove. Nearly the whole of the metal required for the road has been purchased, and all the ditches belonging to the old Fort have been filled in.

Sanctioned for 1865-66 ..... Rs. 1,25,000
Expended in 1865-66 ..... ,, 1,05,340

Road from Dhurrumter to Kurjut.

284. *Northern Concan.*—This road as originally designed was to run from Dhurrumter to Campolee, a distance of about 23 miles, but since the opening of the Bhore Ghaut Incline Government considered it advisable to divert this road to Kurjut. The total distance of this proposed road, viz. from Dhurrumter to Kurjut, would be about 30 miles. A portion of this road from Chowk to Kurjut (distance about 6 miles) is completed this year from Local Funds.

Nearly the whole of the embankment and cutting in 4½ miles, seven slab drains, and one culvert of 15′ span, completed this year. The survey of the line towards Chowk is finished, and a trial path 6 feet wide, and about 7 miles in length, cut over the ghaut between Penn and Chowk.

About seven miles of road completed, with the exception of a large bridge of 5 arches, each 40′ span, over the Penn river. Embankment over 4½ miles completed, and kerb-stones ready and will be set after the rains.

Allotment for 1865-66.....	Rs.	70,000
Expended in 1865-66	,,	65,478
Balance unexpended....	Rs.	4,522

Metalling the Road from Kalhair to Wassind. Local Funds.

285. The whole of the road, about 22 miles in length, was metalled and partially rolled last year. Rolling completed this year.

Allotment for 1865-66	Rs.	2,262
Expended in 1865-66.....	,,	2,262

Road from Bassein to Manickpoor. Local Funds.

286. Completed, with the exception of a small portion through the town of Bassein.

Allotment for 1865-66.....	Rs.	15,000
Expended in 1865-66.....	,,	14,193
Balance unexpended....	Rs.	807

Roads through the Town of Callian. Local Funds.

287. The approach road to Bunder metalled and consolidated; the rest of the work was done last year. Completed.

Allotment for 1865-66.....	Rs.	1,238
Expended in 1865-66	,,	1,238

Road from Persick to Panwell. Local Funds.

288. The work during this year consists of embankment over 5 miles, 48 slab drains of sizes, preparation of materials for a large bridge of 13 arches each 25 feet span, pointing to parapets of drains, and kerbing to 4 miles.

The total number of completed drains is 198. Road completed in all respects to eight miles. If funds are available the whole road, with the exception of a large bridge, will be completed by the end of this official year 1866-67.

Allotment for 1865-66	Rs.	30,000
Expenditure in 1865-66	,,	29,206
Balance unexpended....	Rs.	794

Road from Alibaug to Poinar. Local Funds.

289. Works done during the year: Embankment and cutting over two miles, 14 slab drains of sizes, and foundations for a bridge of 4 arches each 18′ span.

Out of the total length of 10 miles about 3½ miles on Alibaug and 1½ on Poinar sides completed; cutting over ghaut portion about three-fourths finished.

Allotment for 1865-66.....	Rs.	20,000
Expended in 1865-66	,,	13,985
Balance unexpended....	Rs.	6,015

Road from Chowk to Kurjut Railway Station. Local Funds.

290. The progress during the year consisted in finishing two small bridges, one of one arch 28′ span, and the other of two arches each 15′ span, and cutting in rock here and there, and kerbing to about half mile.

The entire length of the road is about 6 miles, having two small bridges, 4 culverts, and 30 drains kerbed throughout. The unexpended balance is due to the alterations in the original design. Completed.

Allotment for 1865-66.....	Rs.	10,000
Expended in 1865-66	,,	4,508
Saving....	Rs.	5,492

Road from Oorun to Panwell. Local Funds.

291. One mile between Oolwa and Koondeewal completed this year. Road between Oorun and Jasaee, about 6 miles, nearly completed. Road kerbed to a length of about 1½

miles. No masonry work executed during this year for want of funds.

The entire length is a little more than 12 miles. Embankment and cutting nearly finished, also one large bridge and about half of the masonry work.

Allotment for 1865-66	Rs.	8,500
Expended in 1865-66	,,	8,289
Balance unexpended	Rs.	211

Road from Callian to Bhewndye. Local Funds.

292. Two small culverts, 1 drain embankment over half a mile kerbing and dry stone pitching to side slopes executed during this year.

The entire length of this road is a little more than 5 miles. Completed.

Allotment for 1865-66.....	Rs.	5,460
Expended in 1865-66	,,	5,927
Excess....	Rs.	467

Road from Nagotna to Dhurumter. Bombay 1 per Cent. Income Tax Fund.

293. The following works were executed during this year: Embankment over two remaining miles, nearly the whole of the cutting throughout its entire length, 13 drains, stones for Neigree bridge prepared, and kerbing and moorum to about 2½ miles laid.

The length of this road is 13½ miles, having two large bridges, 10 culverts, and about 80 drains. Very little masonry work is done.

Allotment for 1865-66.....	Rs.	32,606
Expended in 1865-66	,,	18,576
Balance unexpended....	Rs.	14,030

294. Sanction arrived very late, and hence the large unexpended balance. Work executed in 1865-66: Embankment over 1½ miles thrown, superstructure of 2 wooden bridges each 24′ and 15′ span, 1 culvert and 4 barrel-drains completed.

Road from Virar to Agasee *vid* Bolinge. Local Funds.

This road is about 4 miles long, embankment nearly completed, half of the masonry, kerbing, and surface formation of metal will be executed next year.

Allotment for 1865-66.....	Rs.	16,000
Expended in 1865-66	,,	9,769
Balance unexpended....	Rs.	6,231

295. The sanction for this work arrived very late in the season, when there was no subordinate available to take the work in hand departmentally. Embankments over ½ mile thrown.

Road from Mahim to Nowlee Railway Station. Local Funds.

Allotment for 1865-66.....	Rs.	17,500
Expended in 1865-66	,,	842
Balance unexpended....	Rs.	16,658

296. Works done during the year: Embankment thrown over 6½ miles, cutting in rock and moorum executed over the same distance. Moorum formation and kerbing to about 2½ miles; 18 drains of sizes constructed. Embankment nearly finished; moorum formation and kerbing about one-sixth finished; much of the masonry work remains to be completed.

Road from Alibaug to Mandwa and Rewas. Bombay 1 per Cent. Income Tax Fund.

Allotment for 1865-66.....	Rs.	54,292
Expended in 1865-66	,,	25,911
Balance unexpended....	Rs.	28,381

297. Embankment, which is about one-fourth of a mile in length, is completed. The railing will be erected after the close of the monsoon.

Earthen Embankment over the Belpara Creek. Local Funds.

Allotment for 1865-66	Rs.	5,092,
Expended in 1865-66	,,	2,911
Balance unexpended....	Rs.	2,181

298. The necessity for this bridge was not recognised by the Superintending Engineer Northern Division. An earthen embankment has been substituted for the bridge, all the materials of which have been transferred to another work.

Bridge on the Road from Oorun to Panwell. Local Funds.

Allotment for 1865-66	Rs.	2,800
Expended in 1865-66	,,	188
Balance unexpended....	Rs.	2,612

299. Messrs. Nicol and Co. have been requested by the Collector to order out one of Mr. Sedley's Patent Bridges. The expenditure showing preparation of materials, which will be transferred to other works.

Bridge over the Pinjal River at Khoodalla. Local Funds.

Allotment for 1865-66	Rs.	3,320
Expended in 1865-66..	,,	2,194
Balance unexpended....	Rs.	1,126

300. *Khandeish.*—This work has progressed satisfactorily and well. It will probably be opened from Dhoolia to Tulwara and from Mehoonbara to Challisgaum (in all about 42 miles)

Road and Bridges from Dhoolia to Challisgaum.

by 1st October next, including the fine bridge across the Borree river, all the large arches of which (9 of 45) have been turned during the past season. Rupees 1,25,781 have been spent.

Road over the Kondaebarree Ghaut.

301. This work was on the point of completion when a lofty single arch bridge known as No. 29 fell down owing to bad work, and a new grant must now be made to enable the work to be completed. Expenditure in the year Rs. 4,090.

Improving the Khandeish portion of the Agra Road.

302. Rupees 19,548 have been spent during the year, and it is hoped that the balance of the estimate, viz. Rs. 85,878, may be given in 1866-67, as the state of the road is still far from satisfactory.

Metalling portions of the Agra Road between Bhoreghur and Chandore.

303. Rupees 7,116 were spent during the year on this work, and it will be completed during 1866-67. About 37 miles have been metalled, or will be so immediately.

Metalling the Malligaum and Munmar Road.

304. Metal has been stacked for nearly the whole of this road, and will be put down and consolidated during the coming monsoon. Expenditure in the year Rs. 37,927.

Dhoolia and Surat Road.

305. The survey of the portion of the Dhoolia and Surat road, lying within the Khandeish division, has been nearly completed. Detailed plans and estimates are expected to be submitted by the 1st October next. Expenditure Rs. 204.

306. This work has progressed most satisfactorily, and the line will probably be opened for traffic before the end of the monsoon. Expenditure Rupees 55,110.

Road up the Sailbarree Pass. Local Funds.

307. *Ahmedabad.*—The bridges, with the exception of one near Bhimmath, are completed as far as the roadway; the wing walls are in course of construction. Work during the year has been chiefly confined to entirely iron bridges between Tugdee and Dhundooka. 380 running feet of iron bridges have been put together departmentally. The earthworks have all been completed, and the road may be said to be completed with the exception of metalling a portion.

Road and Bridges between Gogo and Dhundooka.

Sanction for 1865-66	Rs.	2,00,000 0 0
Expenditure in 1865-66	„	1,99,560 9 11
Special repairs to ditto.		
Sanctioned for 1865-66	„	6,800 0 0
Expended in 1865-66	„	2,489 1 7

Survey for Road between Deesa and Puttun.

Sanctioned allotment for 1865-66	Rs.	427 0 0
Expended in 1865-66	„	65 4 7
Saving....	Rs.	361 11 5

Explanation.—Masonry benchmarks have not been erected, and other expenses estimated for were unnecessary.

308. *Deesa.*—The amount shown in the margin has been expended in the survey of the Ahmedabad and Deesa road from Deesa to Puttun.

309. *Ahmedabad.*—This road is completed as an unmetalled, bridged, and embanked road. A few minor works, such as erecting milestones and watering trees, alone remain to be carried out.

Road from Surkej to Veerungaum, length 30½ miles. Local Funds.

Estimated.....	Rs.	2,29,231	0	0
Sanction for 1865-66	,,	30,000	0	0
Expenditure in 1865-66	,,	35,902	9	2

Extension to the above to Mandul and Patree. Local Funds.

310. This line is completed as a cleared road. Two bridges and one or two drains will be carried out another year.

Estimated	Rs.	34,741	0	0
Sanction for 1865-66	,,	3,473	0	0
Expenditure in 1865-66....	,,	7,515	11	2

Road from Ahmedabad to Dholka as far as Nowapoor. Local Funds.

311. The Local Funds Committee thinking an embanked road with drains unnecessary, only such work as was absolutely necessary to make the road passable was executed. This consisted in several embankments and cuttings and two drains, one of which is completed and the other nearly so.

Sanction for 1865-66	Rs.	1,41,903	0	0
Expenditure	,,	5,684	7	8
Estimated.....	,,	26,933	0	0

Road from Guneshbaree to Astoria Gate. Railway Suburb Funds.

312. This is to be an approach from the Railway Station to the bridge over the Saburmuttee. The funds are contributed from the Railway Suburb Funds; the road is passable for carts throughout. Work during the season has been confined generally to constructing small drains and culverts; these are nearly all completed or will be so by the end of July.

Sanction for 1865-66	Rs.	40,357	0	0
Expenditure.....	,,	39,996	7	5

Iron Tramways on the Bhogawa Bridge, Dhoolera. Dhurrumtalao Fund.

313. *Ahmedabad.*—Work in hand. Delay occurred in obtaining materials.

Sanction	Rs.	2,500
Expenditure	,,	2,500

Construction of the Road from Chota Damaun to Wappee Railway Station.

314. *Surat.*—2½ miles of embankment thrown up, 46,450 solid feet moorum collected for surface coating, 7 single slab drains, 2½′ × 2½′, one 3′ × 3′, also 3 double slab stone drains 3′ × 4′, one double 4′ × 4′, and one treble 3′ × 3′ constructed, with the exception of parapets and coping, one 21-feet span single culvert brought up to springing, centering made, and archwork commenced, and the foundations of a 16-feet culvert commenced.

Allotment for 1865-66	Rs.	21,491
Expended in 1865-66	,,	13,210
Balance	Rs.	8,281

Construction of Road from Nowsaree to Victoria Dispensary at Kalliawaree.

315. Nearly one-third of the embankment finished; one barrel-drain 3 feet, one vent, nearly finished. Foundations of bridge excavated, and filling-in commenced.

Allotment for 1865-66	Rs.	18,376
Expended in 1865-66	,,	1,547
Balance	Rs.	16,829

Road from Oolpar to Randier, 8½ miles. Local Funds.

316. Remaining 2 miles of embankment nearly finished, 10 drains from 2′ one vent to 4′ two vents completed. Kunker sufficient to provide four miles with a layer of about 2″ thickness to the breadth of 18′, collected and partly spread on the road.

Allotment for 1865-66.....	Rs.	15,150
Expended in 1865-66.....	„	14,716
Balance....	Rs.	434

Road from Oolpar to Sayen, 8¾ miles. Local Funds.

317. Remaining 7 miles of earthwork is nearly completed. Three drains built and one in progress; metal sufficient for 3½″ average layer to the length of 4 miles collected and heaped, and partly spread on the road.

Allotment for 1865-66.....	Rs.	14,500
Expended in 1865-66.....	„	11,621
Balance....	Rs.	2,879

Road from Keem to Turkesur, 8⅓ miles. Local Funds.

318. Four and a half miles of embankment thrown up, 2 barrel-drains 3′ two vents completed.

Allotment for 1865-66.....	Rs.	20,000
Expended in 1865-66.....	„	13,403
Balance....	Rs.	6,597

Road from Unklesur to Hansote, 13 miles. Local Funds.

319. The original width of the embankment being unequal, it has been brought up to a uniform width of 22 feet to a distance of 6 miles, and the remaining 2 miles of embankment have been thrown up, ruts and hollows have been filled in wherever necessary, and 2 drains of 4′ three vents half finished.

Allotment for 1865-66.....	Rs.	15,000
Expended in 1865-66.....	„	13,970
Balance....	Rs.	1,030

320. The remaining masonry of the skew bridge of one span 15 feet, and that of another bridge of one span 20 feet have been completed with parapets and coping. Six miles of embankment of road have been repaired, and a layer of sand 2¾ inches in thickness has been spread on the surface of the whole road and rolled, thus completing the road; it has been thrown open for traffic.

Road from Jamboosur to Ahmode, 6 miles. Local Funds.

Allotment for 1865-66	Rs.	18,276
Expended in 1865-66	„	17,786
Saving	Rs.	490

321. Four miles of embankment has been repaired, which had been damaged by rains.

Road from Ahmode to Palej, 14 miles. Local Funds.

Allotment for 1865-66	Rs.	1,500
Expended in 1865-66	„	1,431
Saving	Rs.	69

322. Line cleared to a length of 18 miles. Work in progress.

Fair-weather Road from Kaliawaree to Sepoar. Local Funds.

Allotment for 1865-66	Rs.	6,834
Expended in 1865-66	„	6,652
Balance	Rs.	182

323. One barrel-drain 4′ three vents completed, and foundations for culverts one 10 feet span, another 12 feet span, are filled in, and superstructure is in progress.

Culverts and Drains on the Road from Unklesur to Abrama. Local Funds.

Allotment for 1865-66 ..... Rs. 6,000
Expended in 1865-66 ..... „ 1,966

Balance.... Rs. 4,034

Culverts on the Road from Erro to Aut. Local Funds.

324. One barrel-drain 2 feet one vent finished, and one culvert of two 10 feet spans is also finished, with the exception of plaster.

Allotment for 1865-66 ..... Rs. 5,000
Expended in 1865-66 ..... „ 1,757

Balance.... Rs. 3,243

Culverts and Drains on the Road from the Par river to Cheewal. Local Funds.

325. Forty small slab drains built, coping and pointing of several other drains executed, earth filled, and moorum spread over some drains, and work completed.

Allotment for 1865-66..... Rs 3,100
Expended in 1865-66 ..... „ 1,497

Balance.... Rs. 1,603

Road, &c. from the Castle to the Delhi Gate at Surat. Local Funds.

326. A new barrel-drain has been constructed under the centre of the road from Bhaga Talao well to within a few feet of the outfall where it bifurcates and joins the old drains (a total length of 930 feet). All the drains to receive and convey into the longitudinal barrels the water from side streets, from the inlet to the outfall, have been constructed up to coping of parapet. An underground longitudinal barrel-drain from Bhora's Muzeed near Allaya's Wadee to Modeekhan's street has also been constructed, length 490 feet; side gutters have been laid in masonry

half way from the Castle to the inlet (a length of 640 feet); side streets up to the inlet have been partly raised to facilitate drainage, and the necessary embankments have been raised along various portions of the line.

Allotment for 1865-66	Rs.	80,000
Expended in 1865-66	,,	35,641
Balance....	Rs.	44,359

Timber Bridge at Achode. Local Funds.

327. The bridge is entirely of timber, and consists of 10 bays of 20 feet each, superstructure teak girders, cross planking, rails, &c., on teak piles. Woodwork partly prepared last year and completed and set up this year. Work completed.

Allotment for 1865-66	Rs.	8,181
Expended in 1865-66	,,	8,181

Erection of the Masina Bridge. Local Funds.

328. Two extra 30-feet spans have been added to the south end of the bridge. An extra pier and abutment have been built, and the former south abutment cut down to form another pier. These spans are in every way similar to the other spans of the bridge.

Allotment for 1865-66.....	Rs.	7,534
Expended in 1865-66	,,	6,980
Saving....	Rs.	554

Iron Bridge across the Bhatta Creek. Amount contributed by the Honourable Rustomjee Jamsetjee Jejeebhoy.

329. Half payment for iron work made to contractors on the production of the bills of lading. The ship has not yet arrived in Bombay, and the work has not therefore been commenced.

Allotment for 1865-66	Rs.	15,011
Expended in 1865-66	,,	4,052
Balance....	Rs.	10,959

Road from Neriad to Kupperwunj. Local Funds.

330. *Kaira.*—One skew bridge of two spans of 20 feet each, and another of one span of 12 feet, are under construction at Belodra, and will be completed before the monsoon. A few barrel-drains have been constructed. Brick and kunker metalling to be spread during the monsoon has been collected on 10 miles of the road.

Budget estimate	Rs.	6,000
Do. for metalling	,,	30,000
	Rs.	36,000
Actual expenditure	,,	14,144
Balance....	Rs.	21,856

Road from Oomerit to Palee. Local Funds.

331. Seven miles have been cleared. The foundations of a large skew bridge of 25 feet span have been laid at Angharey. A temporary gabion bridge (250 feet long) has been constructed across the fair-weather stream of the river Mhyee at Palee.

Road from Mehmoodabad to Matur. Local Funds.

332. A portion of this (1 mile and 976 feet) is under construction. Embankments have been made, two culverts constructed, and metal (kunker and brick) collected to be spread in the monsoon.

Budget estimate	Rs.	6,000
Actual expenditure.....	,,	5,316
Balance....	Rs.	684

333. Two bridges have been completed, one of seven and the other of three arches of 30 feet span, and the foundations of a third at Vizulpoor laid. Two large culverts and a few barrel-drains have also been constructed.

Road from Godra to Khakuria. Local Funds.

Budget estimate	Rs.	91,627
Actual expenditure	,,	50,435
Balance....	Rs.	41,192

334. The clearance of the whole of this road (12 miles in length) is in progress, and will probably be completed before the monsoon.

Road from Godra to Shehra. Local Funds.

Budget estimate	Rs.	5,000
Actual expenditure	,,	2,524
Balance....	Rs.	2,476

335. A portion near Sûhij of 1 mile and 420 feet in length has been cleared. A brick masonry bridge of 10 feet span, and two single barrel-drains of 3 feet diameter have been built by contract. Other bridges and drains are under construction.

Road from Kaira to Dholka. Local Funds.

Budget estimate	Rs.	6,958
Actual expenditure	,,	3,424
Balance....	Rs.	3,534

336. A length of 650 feet remaining parallel to the Railway has been cleared, and the centre ten feet of the remainder has been metalled. Trees have been planted at the sides of the road.

Road from Mehmoodabad to Mehmoodabad Railway Station. Local Funds.

Budget estimate	Rs. 2,139
Actual expenditure	„ 1,162
Saving	Rs. 977

Road from Borsud to the Wassud Railway Station. Local Funds.

337. One brick masonry bridge of 12 feet span has been built, also one culvert and four barrel-drains.

Budget estimate	Rs. 8,834
Actual expenditure	„ 4,923
Balance....	Rs. 3,911

Road from Gedra to Oorwarra. Local Funds.

338. The clearance of this road is now in progress, and will be completed before the rains.

Budget estimate	Rs. 5,000
Actual expenditure	„ 4,104
Balance....	Rs. 896

Iron Bridge, Screw Piles, over the River Seree on the road from Neriad to Mahoonda. Local Funds.

339. Under construction by contractors Messrs. Forde and Preston. The materials of the bridge have just reached Bombay from England.

340. *Poona District.*—About one-seventh of the whole length of the parapet walls on the Katruz Ghaut has been built. The Capoorwall bridge, which consists of 3 arches of 40′ span each, has been completed, and ten bridges and culverts varying from 5 to 20 feet span, with 34 slab drains, have also been built during the year. With the exception of the works mentioned

Road from Poona *viâ* Katruz Ghaut to Sheerwul, on Poona to Madras Line of Road.

below, the whole road from Poona to Sheerwul is finished, and it has been opened to traffic:—six-sevenths of ghaut parapet; small portions of cutting near the tunnel entrances; facia to tunnel; metalling the whole road from Poona to Sheerwul.

Allotment ..... Rs. 50,000
Expenditure in 1865-66 ..... „ 49,992

Road from Railway crossing at Kirkee to Awund.

341. This road is nearly two miles in length, and has been commenced.

Branch Road to connect the Gunnesh Khind and Kirkee Roads.

342. The length of this road is 1,100 feet; about two-thirds of the whole work has been completed.

Allotment ..... Rs. 2,541
Expenditure in 1865-66 ..... „ 1,704

Footpath on the Road opposite Arsenal to David Sassoon Hospital.

343. Two-thirds of the whole length has been completed.

Allotment ..... Rs. 1,545
Expenditure in 1865-66 ..... „ 1,045

Land for widening and improving Road between Poona and Kirkee.

344. Land purchased.

Allotment ..... Rs. 3,466
Expenditure in 1865-66 ..... „ 3,466

Bridge over the Moota Moola River below the Jamsetjee Bund.

345. This bridge consists of 13 arches, each 60 feet span; the foundations have been excavated and filled in; the abutment on the Poona side has been raised to 10′ 11″, that on the Kirkee side 3′ 10,″ and the piers, 12 in number, have been built on an average 17 feet high.

Allotment ..... Rs. 70,000
Expenditure in 1865-66 ..... „ 57,792

Bridge over the Ghore River on Poona and Ahmednuggur Road.

346. This bridge is of 17 arches, each 40 feet span; the foundations have been excavated and filled in; the abutment on the Seroor side has been raised 9 feet, and 13 of the piers to an average height of 6 feet.

Allotment ..... Rs. 30,000
Expenditure in 1865-66 ..... „ 15,141

Small Bridges and Drains on Road Sattara to Warna River, Madras Line.

347. *Sattara.*—Part of the expenditure incurred during the year 1864-65 was in excess of the sanctioned allotment for that year, and has therefore been debited to the allotment for the current year; the money was expended in making certain additions to masonry works on the line.

Allotment ..... Rs. 3,472
Expenditure in 1865-66 ..... „ 1,280

Bridge over the Quoina River at Kurrar, Madras Line.

348. Out of the allotment Rs. 23,948 the sum of Rs. 21,855 was expended in conducting the work in accordance with the original design; this has been abandoned, and although it has been determined to substitute iron for stone and lime in the greater portion of the structure, the details of construction have not yet been finally settled.

Paving under the centre arch of Tarlee Bridge, Madras Line.

349. Owing to the great scour which took place under the centre arch of the bridge, it became necessary to take measures for securing the work by a masonry flooring of lime and

stone; the excavation was filled in with dry rubble, and the pavement made two feet in depth in front of the bridge. Extending the whole space between the wing walls an apron has also been constructed formed of large stones 2 feet in length, laid on end, and the interstices well packed and rammed with chips; the work seems very solid, and should prove durable; it has been recommended to complete the flooring of the two side arches of the bridge which are less affected by scours than the centre portion in the same manner, in order to bring the floors of these waterways on a level with the surface of the apron.

Sanctioned amount.....	Rs.	3,494
Expenditure in 1865-66.....	„	3,022

Large Bridges and Improvements to Road from foot of Wurrunda Ghaut to Mhar.

350. These have been the heaviest works undertaken in the Sattara district during the past season. The bridge expenditure was entirely confined to the operations carried on at the Savitree bridge—a structure comprising 7 arches of 40 feet span, and which at the commencement of the season had the abutments and piers built up to the level of the springing, with the exception of the pier in the centre of the stream, to which nothing had been done. The arches were completed on the 24th of May 1866, and the bridge is now completed and open to traffic. Under the road expenditure referred to $2\frac{5}{8}$ miles of road have been covered with a 3 inch layer of moorum, and $7\frac{3}{4}$ miles moorumed to an average depth of 6 inches.

Allotment.....	Rs.	25,991
Additional grant	„	12,757
Expenditure in 1865-66	„	38,748

Constructing Ghaut track through the Koodal Khind.

351. The money on this work, viz. Rs. 2,000, has been obtained from Local Funds. A roadway 9 feet wide has been carried along the side of the hill for a distance of 1 mile 6 furlongs, and ascending a total height of 600 feet, and give an average gradient of 1 in 16′.

Improvements to Passurnee Ghaut Road.

352. The sum of Rs. 857 is portion of the sanction of Rs. 2,000 authorised to provide protection walls, and to remove the projecting angles of the road near the foot of the ghaut which caused great obstruction and inconvenience to traffic. Debitable to Local Funds.

Expended in 1865-66.....Rs. 857

Bridges on the Road Belgaum to Warna River, Madras Line.

353. *Belgaum.*—Bridge over Doodgunga river: backing to arches, cornice, and parapet walls, &c. completed during the year; embankments on both sides raised.

Bridge over Yedgunga river, roadway over bridge formed and metalled, embankments on both sides raised.

Bridge over Hurunkashee river, do. do. do.

Allotment.....Rs. 27,444
Expenditure in 1865-66 ..... „ 22,899

Protecting outer side of the Towndy Ghaut, Belgaum and Kolapoor Road, Madras Line.

354. Guardstones 4 feet in length and 2 feet above ground were placed in dangerous parts along the outer odge of the road at intervals of 5 feet. They answer tolerably well the purpose of a protection wall, and are not nearly so costly.

Sanctioned amount ..... Rs. 1,918
Expenditure in 1865-66 ..... „ 1,707

New Road Belgaum to Vingorla, *viâ* Parpoolee Ghaut.

355. The work executed during the year was as follows:—

41 drains and culverts built.
11 miles of moorum surface formed.
248,300 cubic feet rock cut.
9,914 „ retaining walls built.
6,442 „ parapet walls to the ghaut portion built, and approaches to large rivers made.

The road will probably be ready for traffic by the 1st January 1867, but the large bridges will take some time to erect.

Allotment ..... Rs. 1,00,000
Expenditure in 1865-66 ..... „ 74,686

Soonkewal and Muneera Road.

356. With the exception of two bridges the line is nearly completed as a moorum road. Expenditure debitable to Local Funds.

Allotment ..... Rs. 8,000
Additional sanction ..... „ 1,660
Expenditure in 1865-66 ..... „ 9,654

Unkulghee and Gokak Road.

357. 15½ miles of road have been cleared and opened for traffic. Expenditure debitable to Local Funds.

Allotment ..... Rs. 5,989
Expenditure in 1865-66 ..... „ 5,050

Road from Gasarepoora to Railway Station.

358. *Poona.*—Completed. This road is 2,400 feet in length.

Allotment ..... Rs. 5,382
Expenditure in 1865-66 ..... „ 4,521

Road Railway crossing Kirkee to Awund.

358A. *Poona District.*—This road is nearly two miles in length, and has been commenced.

Expenditure in 1865-66 ..... Rs. 1,531

Branch Road to connect the Gunnesh Khind and Kirkee Roads.

358B. The length of this road is 1,100 feet; about two-thirds of the whole work has been completed.

Allotment ..... Rs. 2,541
Expenditure in 1865-66 ..... „ 1,704

Footpath on the Road opposite Arsenal to David Sassoon Hospital.

358C. Two-thirds of the whole length has been completed.

Allotment ..... Rs. 1,545
Expenditure in 1865-66 ..... „ 1,045

Land for widening and improving the Road between Poona and Kirkee.

358D. Land purchased.

Allotment ..... Rs. 3,466
Expenditure in 1865-66 ..... „ 3,466

359. *Ahmednuggur.*—The road has been completed as a second class moorum road. Local work.

Nandoor and Kolhar Road.

Allotment ..... Rs. 23,807
Expenditure in 1865-66 ..... „ 23,753

Parapet Walls to the Chunderpoora Ghaut.

360. Completed. Local work.

Allotment.....Rs. 4,402
Expenditure in 1865-66 ..... „ 4,424

Munmar and Yeola Road.

361. *Nassick.*—The following works have been completed during the year :—

1 bridge of 3 arches of 35 feet span each.
1 culvert of 2 openings of 14 feet span.
1 do. 1 do. of 10 do.
4 single slab drains
Local work.

Allotment.....Rs. 12,500
Expenditure in 1865-66 ..... „ 9,685

Widening Road down the Suttee Ghaut.

362. The ghaut road has been widened. Local work.

Allotment.....Rs. 4,000
Expenditure in 1865-66 ..... „ 4,005

Road Hursool to Kurukwohol.

363. The length of this road is 18 miles, 14 miles of which have been cleared. Local work.

Allotment.....Rs. 4,000
Expenditure in 1865-66..... „ 4,000

Iron Boat for Kadwa River at Konkungaum.

364. Completed. Local work.

Allotment .....Rs. 3,000
Expenditure in 1865-66..... „ 909

Road from Barsee to Barsee Road Station.

365. *Sholapoor.*—Nearly completed (*vide* former reports).

Expenditure in 1865-66.....Rs. 5,233

366. Nine pier foundations and one abutment foundation have been filled in, and the superstructure has been raised a little above the bed of the river. Great difficulty has been encountered in laying the foundations for this bridge.

Bridge over the Seena River on new Road Barsee to Barsee Road Station.

Allotment	Rs.	73,074
Additional do.	,,	10,000
Expenditure in 1865-66	,,	78,369

Ferry Boat across the Bheema and Taklee.

367. A single ferry boat to ply across the river has been constructed. Local Fund work.

Sanctioned amount	Rs.	1,903
Expenditure in 1865-66	,,	376

Road from foot of Koombarli Ghaut to Chiploon and Gowulcote.

368. *Rutnagherry.*—The amount of work executed on the line during the year is as below :—

Earthwork	Cubic feet	757,977
Dry rubble work	,,	1,328
Superstructure of stone and lime.	,,	18,066

The work is approaching completion.

Allotment	Rs.	50,000
Expenditure in 1865-66	,,	46,265

Cleared road from Vingorla to Malligaum *viâ* Shirowda.

369. Completed. Local work.

Allotment	Rs.	5,825
Expenditure in 1865-66	,,	5,513

370. *Canara.*—The work for which this large expenditure is included in the past year's accounts was nearly all done in the previous year, but was unavoidably left for adjustment till that just closed.

Road from Yellapoor *viâ* Kyga Ghaut to Karwar.

The ghaut road is everywhere 12′ wide; with the exception of two temporary timber bridges requiring repair, is quite passable for carts. The road from Mullapoor to the bottom of the ghaut (10 miles) is 24′ wide, and with the exception of four large bridges, is complete throughout.

The several kinds and quantities of work done are as follows:—

428,900	cubic feet	excavation in moorum and boulders.
791,700	,,	ditto in soft rock.
368,692	,,	ditto in earth and boulders.
163,106	,,	blasting in rock.
1,084,536	,,	excavation in earth.
18,250	,,	rubble stone and lime masonry.
200,977	,,	excavation in earth and moorum.
87,270	,,	ditto in hard rock.
155,890	,,	filling in earth.
2,035	,,	laterite and lime masonry.
92,572	,,	metalling.
627,923	,,	filling in moorum.
17,760	,,	excavation side channels.
55,061	,,	ditto in boulders.
88,983	,,	filling in land.
111,222	square feet	clearing jungle.
33	temporary drains	built.

Road from Dharwar frontier *viâ* Ankola to Carwar.

371. A limited amount of work has been accomplished on the road owing to the small allotment made. The road work executed consists of little more than bringing the roadway to its proper section, and the masonry work has been confined to the completion of two bridges, one of which, the Hundyundy, consisting of 7 openings of 30 feet each, spans a broad and rapid stream, which proved at times a considerable obstacle to traffic.

372. Very little more than the collection of materials has been done during the past season; the district is an unhealthy one, and the contractor who had agreed to do the work utterly failed to accomplish it. It is hoped that the work will be satisfactorily finished during the current year. Debitable to Local Funds.

Gairsoppa Ghaut Bridges.

373. *Dharwar.*—Nearly completed, with the exception of a few drains and moorumming the surface.

Bunkapoor and Hurryhur Road.

Allotment for 1865-66 .....Rs. 63,255

374. With the exception of the Kirkee and Bennehal bridges, and a few drains, nearly the whole line has been improved.

Dharwar and Bunkapoor Road improvements.

Allotment for 1865-66.....Rs. 15,000

375. Completed with the exception of the moorum surface, and one bridge, that over the Soal river, which has failed.

Road from Annigherry to Gudduck.

Allotment for 1865-66 .....Rs. 22,316

376. One bridge at Goodhully completed; the embankments and cuttings near Goodhully in progress.

Improvements to the Dharwar and Tenai Ghaut Road.

Allotment for 1865-66.....Rs. 6,000

377. The works estimated for have been nearly completed, but some of the bridges and drains have not sufficient waterways, and have been badly constructed.

Hooblee and Annigherry Road.

Allotment for 1865-66.....Rs. 8,000

Bunkapoor and Moondagode Road.

378. Completed, with the exception of a deviation about a mile in length.

Allotment for 1865-66 .. ..Rs. 7,284

Four large Bridges on the Dharwar and Tenai Ghaut Road.

379. One at Astolee completed, and the other at Arwudghee in progress, completed up to springing; two at Sawarcope and at Lingunmutt failed.

Allotment for 1865-66 ..... Rs. 29,000

Northern Trunk Road from Hydrabad to Roree.

380. *Hydrabad.*—On the portion between Hydrabad and the northern boundary of that collectorate, which is under the charge of the Executive Engineer Lower and Central Sind, the undermentioned work has been executed. The following masonry bridges, commenced during the past official year, have been completed, viz:—

One bridge of 3 arches, 16, 24, and 16 feet spans respectively.

One of 3 arches, 15, 20, and 15 feet spans.

One of 22 feet span, one of 21 feet, two of 20 feet, five of 13 feet, five of 9 feet, and two of 6 feet span.

The following were commenced and completed during the year:—

One of 16 feet span, two of 12 feet, one of 10 feet, two of 9 feet, and two of 8 feet span; and four bridges of different spans were in various stages of progress.

Expenditure during the year..... Rs. 14,760

On the portion of the same road from the southern boundary of the Khyrpoor State to Roree under the charge

of the Executive Engineer Upper Sind, 33 bridges and culverts, three of 12 feet span, two of 7 feet, four of 6 feet, six of 5 feet, seven of 4 feet, and eleven of 3 feet span, as well as 26 small drains, and about 500,000 cubic feet of embankment have been constructed.

Expenditure during the year..... Rs. 13,836

Road from Hydrabad to Oomerkote.

380A. On the road from Hydrabad to Oomerkote, under the charge of the Executive Engineer Lower and Central Sind, the following masonry bridges, commenced during the past official year, have been completed, viz:—

Two of 28 feet span, one of 26 feet, two of 17 feet, and three of 12 feet span, and six of different spans are in various stages of progress.

Expenditure during the year ..... Rs. 10,631

Improving the High Road from Hydrabad towards Mahomed Khan's Tanda.

381. This work has proceeded under the orders of the Collector of Hydrabad. The improvements have extended over a length of 18 miles, portions liable to be flooded have been raised, and dangerous holes caused by rain filled in. Embankments aggregating 480 feet in length have been formed across two hollows, and the side slopes pitched with dry rubble. Three canal bridges have been restored, and two culverts of 6 feet span each erected.

Expenditure during the year ..... Rs. 2,615

Improving the Ahmedabad Postal Road.

382. On this line is conveyed the dâwk from Hydrabad to Bombay as far as Nowakote, a distance of 58 miles in the direction of Ahmedabad. The work has been undertaken, and the arrangements made by the Collector of Hydrabad on levelled sections afforded by the Executive Engineer Lower and Central Sind, and consists

of raising and embanking all low portions subject to overflow from canal water and rain floods. Funds to the extent of Rs. 8,537 were provided from the Reserve in the Local Fund Budget of the year at the disposal of the Commissioner in Sind.

Expenditure during the year ..... Rs. 2,390

382A. Grants-in-aid to the extent of Rs. 1,975 have been expended by the Collector and his Deputies in the construction of 9 wells in different parts of the Hydrabad Collectorate.

382B. The road from Hydrabad to Giddoo Bunder has been watered and kept in repair at a cost of Rs. 1,500.

382C. From the assignment in the Local Fund Budget of the year to supplement the Imperial grant Rs. 38,601 were expended on repairs to district roads in Sind.

ACCOMMODATION FOR TRAVELLERS.

Constructing a Dhurrumsala at the Railway Station at Manickpoor. Amount contributed by Mr. Sorabjee Pestonjee Framjee.

383. *Northern Concan.*—Foundations and plinth finished, and a portion of woodwork prepared.

Allotment for 1865-66 ..... Rs 15,000
Expended in 1865-66 ..... „ 2,657

Balance unexpended .... Rs. 12,343

Constructing a Dhurrumsala at Bandora. Amount contributed by Sir Jamsetjee Jejeebhoy, Bart.

384. Not commenced. Site not approved.

Allotment for 1865-66 ..... Rs. 10,000

Constructing a Dhurrumsala at Bhurodee. Amount contributed by Framee Nusserwanjee, Esq.

385. Foundations ready.

Allotment for 1865-66	Rs.	5,000
Expended in 1865-66	„	1,160
Balance unexpended	Rs.	3,840

Constructing a Dhurrumsala at Dysur. Amount contributed by Mr. Cursetjee Furdoonjee.

386. Foundations and plinth finished, superstructure half-completed.

Allotment for 1865-66	Rs.	8,000
Expended in 1865-66	„	1,459
Balance unexpended	Rs.	6,541

Constructing a Dhurrumsala at Verar. Amount contributed by Deepchund Roychund, Esq.

387. Foundations completed.

Allotment for 1865-66	Rs.	8,000
Expended in 1865-66	„	1,072
Balance unexpended....	Rs.	6,928

Constructing a Dhurrumsala at Wappee. Amount contributed by Roychund Deepchund, Esq.

388. *Surat.*—Foundations and plinth completed, superstructure one-third completed, all woodwork ready.

Allotment for 1865-66	Rs.	8,056
Expended in 1865-66	„	1,462
Balance....	Rs.	6,594

Constructing a Dhurrumsala at Pardee. Amount contributed by Lady Jamsetjee Jejeebho.

389. Foundations and plinth completed, superstructure half completed. Posts and doors and window frames put up, and woodwork all ready.

Allotment for 1865-66 ..... Rs. 10,127
Expended in 1865-66 ..... „ 2,307

Balance.... Rs. 7,820

Constructing a Dhurrumsala at Broach. Amount contributed by the Honourable Rustomjee Jamsetjee Jejeebhoy.

390. Foundations nearly filled in.

Allotment for 1865-66 ..... Rs. 19,965
Expended in 1865-66..... „ 1,585

Balance.... Rs. 18,380

Travellers' Bungalow and Outhouses at Peint.

391. *Nassick.*—Completed. Local work.

Allotment..... ... Rs. 5,000
Expenditure in 1865-66..... „ 4,674

Dhurrumsalas at Lanowlee, Kirkulla, and Tulligaum.

392. *Poona District.*—These buildings have been almost completed. Debitable to Local Funds.

Allotment ..... Rs. 8,736
Expenditure in 1865-66 ..... „ 8,443

Dhurrumsala at Patus Railway Station.

393. Materials collected. Debitable to Local Funds.

Allotment ..... Rs. 2,500
Expenditure in 1865-66 ..... „ 268

Constructing a Dhurrumsala and Outhouses at Sukkurund, Hydrabad Collectorate.

394. *Sind.*—This work was in progress during the year under the order of the Collector.

Expenditure ..... Rs. 970

WATER COMMUNICATIONS.

Widening the Channel of the Indus at Sukkur for the improvement of the navigation of the River.

395. *Sind.*—The Acting Executive Engineer Upper Sind attributes the slow progress of this work to the following causes—1*st*, The low level which the excavation has reached, which obliges work to be stopped whenever the river rises. It can only be prosecuted with vigour for about five months in the year. 2*ndly*, The nature of the work, consisting of prizing up the rock with long levers after successive blasts, only a limited number of men can work with effect in the space. 3*rdly*, The great difficulty of obtaining sufficient carriage to remove the large amount of débris constantly collecting, which, if not removed, encumbers the working space.

It was at first thought that the outer embankment might have been taken down before the approaching inundation, so as to obtain the effect of the extra width already excavated, but this plan has subsequently been found to be inadvisable, as, if the river were admitted, the lowest portion of the excavations would be filled with silt, thereby entailing considerable expense in removing it after the subsidence of the inundation. It would further necessitate the re-construction of the surrounding embankment when the work was resumed. For these reasons the opening of the work has been deferred until next year, when not only will the rock cutting be completed, but it is expected also the river wall trackway, ramps for the ferry, and other subsidiary works.

Expenditure during the year ..... Rs. 16,331.

MISCELLANEOUS PUBLIC IMPROVEMENTS.

Wellington Memorial Fountain.

396. *Bombay.*—The Architectural Executive Engineer reports: "This work consists of taking down the fountain under

construction by private subscription, and raising it 4 feet above the level of the road, by surrounding it with basalt polished steps of 12″ tread and 6″ rise, with a midway landing of 3 feet, and providing 4 drinking basins on four of the sides of the octagon. Eight lamps are also erected opposite the sides of the octagon. The work is completed.

Sanctioned for 1865-66	Rs.	6,150
Expended in 1865-66	,,	6,230

Planting Trees along the new Roads on the Esplanade.

397. This work having been sanctioned at the close of the last monsoon, 196 trees (principally Bhendy, Bur, Peeple, Nandrook, and Kurrunj) have been planted and enclosed. The trees are in a thriving condition.

Sanctioned amount for 1865-66.....	Rs.	7,500
Expended in 1865-66.....	,,	8,120

Filling in hollows and ditches on the Esplanade, and levelling ground for Building sites generally.

398. Several ditches and hollows that were left open on the Esplanade for want of sufficient material from the late Ramparts have been filled in, and the old sites of the Ramparts extending from the Apollo to the Bazaar Gates, have been levelled. A part of the ditches surrounding Fort George has also been filled in, partly with the earth received from the glacis near the Boree Bunder, and partly with that supplied by contractors.

1st estimated amount	Rs.	1,00,000
2nd do. do.	,,	2,40,220
Budget allotment	,,	1,00,000
Amount subsequently sanctioned....	,,	2,40,220
Expended in 1865-66	,,	1,48,810

399. No works of importance have been executed in 1865-66. The Esplanade Fee Fund Committee was appointed by Government in their Resolution No. 7 A-18, dated 17th January 1866; previous to this date the expenditure of the funds were limited chiefly to the conservancy of the Esplanade.

Esplanade.

Receipts.....Rs. 1,31,772

Expenditure as below:—

ORIGINAL WORKS.	Rs.	a.	p.
Planting the trees on the Esplanade.....	8,126	8	2
Constructing a waste water drain from the north end of the Dhobeewarra to the drain running along the compound of the old Sepoys' Lines	449	0	0
Enclosing a portion of the ground on the Esplanade for carriage stand.....	97	0	0
REPAIRS.			
Cleaning the Esplanade.....	22,875	1	2
Supplying water to the dhobees washing at the Dhobeewarra on the Esplanade	266	5	0
Cleaning Fort George and its ditches	76	14	0
Supplying water to the buffaloes, &c. grazing on the Esplanade	209	14	0
Tending, &c. the trees on the Esplanade..	1,733	14	9
Keeping the turf on the Esplanade in proper order	147	9	10
Ordinary repairs to the Dhobeewarra on the Esplanade	60	0	0
Carried forward...Rs.	34,042	2	11

REPAIRS—(*continued*).	Rs.	a.	p.
Brought forward	34,042	2	11
Repairing sandstone roads in the Marine Lines on the Esplanade, and watering them during the dry season	1,733	11	4
Repairing the Band Stand.....	119	6	11
Repairing Dhobees' Tank	25	0	0
Establishment .....Rs. 5,302 0 1			
Contingencies ..... „ 449 14 0			
	5,751	14	1
Total....Rs.	41,672	3	3

Erecting Dams at Matheran. Bombay 1 per Cent. Income Tax Fund. 400. *Northern Concan.*

Dam near Mr. Jugonnath Sunkersett's.
Do. near Mr. Robertson's.
Do. near sick officers' quarters.

Allotment for 1865-66 .. ..Rs.			4,200
Expended in 1865-66..	1st,	1,764	
	2nd,	2,059	
	3rd,	535	
			4,358
Excess....Rs.			158

This small excess on this work can be defrayed from the amount of contribution by the inhabitants on the hill for water supply works.

1*st.*—Near Jugonnath Sunkersett's house. Work done during this year: Foundations filled in, superstructure built of trap rock and pointed with cement. Cutstone coping made. Completed.

2nd.—Near Mr. Robertson's house. Completed with the exception of a dwarf wall to prevent the entrance of filth.

3rd.—Near sick officers' quarters at Matheran. Work done during the year: Foundations filled in, superstructure of stone and lime in large courses with cut stone coping completed, and the whole work pointed with cement completed.

Dam near Cooly Lines at Matheran.

401. Commenced this year. Foundations and superstructure finished, and the latter pointed with cement. Cutstone pavement made. Completed.

Allotment for 1865-66 ..... Rs. 1,919
Expended in 1865-66, ... „ 1,196

Saving .... Rs. 723

Mullao Tank at Oomerith.

402. *Kaira.*—This tank has been deepened at a cost of Rs. 3,833, and a sluice has been repaired.

Conservancy of Mount Aboo.

403. *Aboo.*—The amount shown below has been expended in draining swamps, uprooting and burning Moya grass, and filling holes on a portion of Mount Aboo. Commenced and completed in April 1866.

Sanctioned allotment for 1865-66 .... Rs. 1,903
Expended in 1865-66..... „ 1,903

Hookerry Aqueduct.

404. *Belgaum.*—Local work. Improvements completed.

Allotment ..... Rs. 1,135
Expenditure in 1865-66..... „ 1,021

405. *Canara.*—One well is nearly completed and the excavation of the shaft for another nearly finished (the work has been done on contract). The third well will be put in hand as soon after the opening of the season as possible. These wells are much required, the want of water on the Arbyle Ghaut road between Yellapoor and the Dharwar frontier being greatly felt.

Wells between Kirwuttee and Yellapoor.

TELEGRAPH BUILDINGS.

406. These extensive buildings were commenced in May 1864. Owing to want of funds but slow progress has been made during the official year. The main buildings an dout-offices with workshop are nearly completed; but the detached quarters remain in the same state as they were on the 30th April 1865. Expenditure during the year Rs. 60,500. Portable wooden offices for erection at Fâo in the Persian Gulf for the Telegraph Department have been made up at Kurrachee at an outlay of Rs. 12,000.

Out-offices for the Indo-European Telegraph Department at Kurrachee.

PUBLIC WORKS—RAILWAY.

At the commencement of the year under review there were 597½* miles of open line. There are now 701½ of line opened (including the Campoolee branch which was reopened in February), the following sections having been opened during the year—from Bhosawul to Boorhanpoor, No. 15 contract (Jubbulpoor line), 34¾ miles on the 20th November; from Sheagaum to Budnaira, No. 13 contract (Nagpoor branch), 72¼ miles, on the 18th December.

LINE UNDER CONSTRUCTION.

2. The progress of the line under construction has been favourable. No. 13 contract is now completed.

3. It is expected that No. 14 contract, reaching to Nagpoor, will be finished by the end of the next cold season; a portion of this contract from Sheagaum to Kowtah will be opened for traffic by the month of July.

4. On No. 15 contract the extension from Bhosawul to Boorhanpoor (31¾ miles) was opened on the 20th November There will in all probability be a further extension during the month of July to Kundwah (42¾ miles). This contract will, it is believed, be completed by June 1867.

5. On No. 16 contract a length of 48 miles to Etarsee (station for Hoosungabad) will be ready for opening by the time No. 15 contract is completed; the latter half of the contract may be opened about a year later.

6. No. 17 contract was taken out of the hands of Messrs. Norris and Weller towards the end of last year, and

* Some discrepancies have come to light in length of line given in previous statement, viz. 595¾.

Mr. Victor, an agent of the contractors, was sent up to engage the sub-contractors employed by Messrs. Norris and Weller or to make other arrangements for carrying on the work without delay. The work has since been progressing favourably. The Nerbudda Viaduct approaches completion. The Sukkur Viaduct is the great difficulty on this contract; it is very backward, and will not probably be finished before 1869. With this exception the contract may be completed to Jubbulpoor by June 1868.

7. No. 18 contract, Sholapoor to Kulburga 70¼ miles. This contract was let in England to Messrs. Adamson and Clowser, and work was commenced on the 30th August 1865. The Boree Viaduct is the largest work on the contract, and consists of 20·30 spans. The work has hitherto progressed favourably.

8. No. 19 contract (88¼ miles) was also let in England to Messrs. Bray and Son, and ground will be broken in May 1866. The contract extends from Kulburga to Raichore, and includes in its length a viaduct over the Kistna.

9. The fishing of the rails between Tanna and Bombay is still in progress; but it is considered more expeditious to relay a considerable portion of both lines with pot sleepers.

OPEN LINE.

10. The doubling the line between Cullian and Wassind is nearly complete, and between Wassind and Kussara, where there is so much hard rock cutting, considerable progress has been made.

11. On the open line two large stations have been completed at Kurjut and Lanowlee, with accommodation for both up and down lines.

12. A trial station was opened at Chinchwud between Tulligaum and Kirkee and has proved successful.

13. At Egutpoora a large tank has been constructed to supply the station with water, the want of which was much felt. As this may some day be a large Locomotive depôt, this certain source of supply will be of great service.

14. Several large necessaries for 3rd class travellers have been put in hand during the past year, and a large number of minor works executed.

15. *Bombay, Overbridges.*—With reference to the matter of overbridges over the portion of the line from Mazagon to Moody Bay, it has been finally determined by a local committee to build three at the joint expense of the Government, the Municipality, and the Railway Company:—1st the Elphinstone Bridge to the south of the Waree Bunder goods station; 2nd the Musjid Bridge at Musjid Bunder; 3rd the Carnac Bridge at Carnac Bunder; a 4th bridge is to be built at Boree Bunder at the sole expense of the Railway Company.

16. *Goods Stations.*—The Company have now run a siding from the main line into their new goods station at Waree Bunder, and have collected a large amount of materials towards the commencement of the work. They have possession of a portion of the station ground and wharfage, but the greater portion of the land has not yet been handed over to them.

17. *Moody Bay Passenger Station.*—The land for the new passenger station at Moody Bay has been nearly reclaimed during the past year, and the connection completed with the existing line to the east of Boree Bunder. The work has been done for Government by the Railway at an estimated cost of two rupees per cubic yard, the total cost being Rs. 5,61,000.

18. There remains still a large number of works to be carried out on the open line to render it at all complete.

The passenger accommodation at a great many of the stations is very deficient: the platforms require lengthening; the goods shedding is quite inadequate to the demands of the traffic, and accommodation for the employés of the Company will certainly require to be much increased. A "Schedule of Works required" was prepared during the past year in concert with the Agent, the Engineer Department, the Traffic Manager, and the Locomotive Superintendent, but it is found useless to attempt to estimate beforehand for all the possible wants of a large undertaking like the G. I. P. Railway, for of all the works for which sanction has been demanded during the past six months only a very few appear in the schedule that was prepared.

19. The Bhore Ghaut was worked throughout the monsoon with scarcely an interruption to the traffic. One landslip occurred which covered both lines to a depth of five or six feet, but the passengers were transferred, and the line was cleared in a couple of days. On the Thull Ghaut a very serious accident occured on the 26th December, when a goods train was precipitated over the embankment at the reversing station (*see* Accidents). There was also one rather serious landslip which blocked the down line for a week and the up line for a whole month.

New Lines.

20. In order to collect the salt traffic it has been under proposal to construct a new line from Campoolee to Hog Island; the survey has been completed, but has not yet been laid before Government.

21. *Maintenance.*—During the past year a great deal has been done towards improving the state of line, necessitating a heavy expenditure in sleepers. During the last half of 1865 the cost per mile amounted to Rs. 1,724 against Rs. 990 in the corresponding half of 1864. This heavy expenditure

has arisen from the inferior quality of the sleepers first put down, and from the line having been imperfectly maintained in previous years. Pot sleepers are now being largely employed both for renewals and new portions of the line. The Company has also invested in a large amount of Johore teak; but experience has not been sufficent yet to determine the merits of these latter classes of sleepers.

22. A great deal of work was turned out by the department during the year, and a large number of covered goods waggons were built by contract, which have undoubtedly reduced the number of accidents from fire and the losses by theft, but the amount of rolling stock is still much under the requirement of the Railway. The cattle-guards have proved very efficient in preventing accidents; they were at first made of iron, but it was found troublesome to repair them, and wooden guards have since been successfully adopted.

23. *Capital Expenditure.*—The total amount of Capital expenditure in India and in England up to the 30th April was £13,970,172, viz:—

In England	£4,837,920
In India	9,132,252
Total....	£13,970,172

The Capital expenditure on open line amounted approximately at the close of this official year to Rs. 10,20,34,665,* or, at the exchange of 1*s.* 10*d.*, to £9,353,177.

24. *Revenue Expenditure.*—The total amount of Revenue expenditure during the year amounted approximately to Rs. 77,22,300, the Revenue receipts to Rs. 1,58,56,600. The net receipts were therefore Rs. 81,34,300, giving a return of 8·87 per cent. per annum on Capital expended on the open line.

* Rolling stock and machinery for the four months of 1866 not included.

25. *Future prospects.*—These figures show a considerable improvement in every respect over past years. The maintenance of the line has undoubtedly been very expensive, but with the more extensive introduction of pot sleepers a great reduction may be expected in these charges. The Locomotive expenditure has also been heavy, but the renewals of stock and replacing burnt vehicles not having been debited to previous half-yearly Revenue expenditure, the charges are unusually heavy in the current year.

26. Nothing could be better than the prospects of the Railway. The traffic, though at this date partaking of the almost universal commercial depression, shows signs of a steady increase, and the further extensions to Nagpore and Jubbulpore cannot but open up a most splendid commerce in cotton, cereals, opium, and the various products of Central India.

27. *Passenger Traffic.*—The receipts from passenger traffic during the year largely exceeded those for 1864-65. The increase of the fares in December 1864 have entirely contributed to this. The number travelling per mile open shows a considerable falling off. The returns for the half-year ending December 1865, as compared with those for December 1864, show that the first class fell off from 43 to 37, the second from 291 to 211, the third from 2943 to 2362 per mile open. The mileage travelled by the first class is apparently nearly stationary, having been 46 miles for the last three years; the mileage of the 2nd class has diminished from an average of 28 miles for the three previous years to 24 miles; the mileage of the 3rd class alone shows an increase from an average of 41 miles to 45 in the present year.

28. The conduct of the passenger traffic admits of great improvement: the delays at stations are tedious, though on the whole the trains arrive at their termini with fair punctuality, the time that is lost at stations being made up

on the road; the accommodation for passengers of all classes at stoppage stations is far from complete; and the crowding of 3rd class passengers, owing to the deficiency of carriages, is still very prevalent. These defects are, however, receiving the Agent's serious consideration, and there is every reason to hope that they will ere long be removed.

29. *Goods Traffic.*—The increased tariff for goods of all classes came into operation on the 15th October. The average gross receipts per week for passengers and goods from the 1st June up to this date were Rs. 1,67,000. For the second week in October the receipts amounted to Rupees 2,30,842, by the end of the month they had increased to upwards of three lakhs; from this period they steadily augmented until the close of March when they finally reached the large amount of Rs. 5,01,460, which was the maximum weekly receipt of the year. The price of cotton then fell very considerably, the present commercial depression set in, and all during April the receipts gradually declined until they finally fell to Rs. 2,76,374 for the last week of that month.* The maximum rates within which the Agent has the power of varying them and the former rates are as follows:—

	Max.	Former.
1st Class.....	12	8
2nd do.	18	10
3rd do.	24	16
4th do.	36	20
5th do.	54	30

30. The amount of cotton conveyed has increased very largely. In 1864 were carried 1,453,439 maunds, in 1865 2,399,779 maunds, and from January to 30th April 1866 no less an amount than 1,246,616 maunds. It is to be

* The receipts have since still further diminished in the current year, and have been less than during 1865.

regretted that owing to a deficiency of carrying power a very considerable amount of cotton came down to Bombay by road, the carriage of which was lost to the Company. The question of pressing the cotton up-country has received a great deal of attention from the Agent, and there is a prospect of native merchants eventually carrying out this improvement.

31. The traffic in salt has also largely increased; it now for the first time figures amongst the chief articles of merchandise, and the construction of a branch line from Campoolee to Hog Island would in all probability greatly develop this item of traffic.

32. *Character of Management.*—The general character of the management throughout the past year shows a certain improvement on that of former years: the trains have been run with very fair punctuality, the stations and the station premises have been better kept, and the Agent has done his best to bring the Traffic department, stationmasters, guards, &c. to a better sense of their duties. The large amount of cotton and seeds brought down in the early months of the year, and the quickness with which it was cleared away from the terminal station at Boree Bunder, say much for the improved management; also the method of registering and stacking in order all cotton as it arrives has done a great deal towards stopping the extensive system of bribing that prevailed at the principal cotton stations.

33. *Police.*—A Government officer has been appointed as Superintendent of Railway Police, he being an Assistant to those Superintendents of Police through whose district the Railway runs. The Railway police have hitherto been of little use, but it is believed that since the introduction of the present system the robberies on the line have materially decreased in number.

34. *Porters.*—A system of ticketing porters has been introduced at the Byculla and Boree Bunder stations which seems to answer; it is purposed to extend it to other large stations on the line. The porters are paid by the public.

35. *Refreshments.*—The General Manager has been authorised to take out licences in his own name for refreshments at whatever station along the line he may think fit to establish them.

36. *Compensation.*—The charges for compensation have diminished very considerably. The amount debitable to each half-year of 1865 was about Rs. 50,000, and that to the first half of the year 1866 will be nearly the same amount. The causes are better arrangements on the part of the Traffic department and of the Police, and the extensive introduction of covered goods waggons, the latter diminishing the amount of compensation both on account of thefts and fires.

37. *Accidents.*—The accidents have been less in number than usual, but one of a very fatal nature occurred at the Thull Ghaut when a goods train ran over the embankment at the end of the reversing station. Six persons were killed and one injured, and the whole of the vehicles were smashed to pieces. The accident appears to have arisen from the waggon-breaks not having been put down before the train got on to the steep portion of the incline. The engine-driver in the dark overshot the place where the trains usually pull up; the train gathered impetus when once on the steep incline; it was found impossible to put on the waggon-breaks; the engine had only, as was the custom, a pressure of about 40 lbs. of steam, and this being inoperative against the heavy train behind, all command over it was soon lost, and it finally rushed over the embankment at a speed of between 60 and 70 miles an hour. Measures have been put in hand which, when completed, will, it is hoped, prevent the recurrence of such a disastrous accident.

38. There have been a great number of attempts to throw trains off the line by placing pot sleepers on the road; fortunately all these attempts have failed, but in no case have any of the perpetrators been yet discovered.

39. *Meeting.*—The system of weekly meetings has proved very successful in facilitating business, and in promoting harmonious cöoperation between the Government and the Railway Company; it has led also to a considerable reduction of correspondence in both offices.

40. *Auditor.*—The introduction of the new method of Railway audit also promises to be successful. It puts the Government in possession of more complete information with regard to Railway monetary transactions, affords a trustworthy audit both to the Government and the Railway Company, and at the same time greatly reduces office correspondence.

41. A summary of the year's work shows a decided improvement in the management of the Railway, the credit of which is mainly due to the thoroughly efficient manner in which the duties of the Agent are at present performed.

BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY.

42. *Line opened during the year.*—No additions were made to the length of the open line during the year; but the second line of rails was opened between Bombay and Bandora.

43. *Works on unopen Line.*—Tolerable progress was made with the works between the temporary terminus of the Railway at Bellasis Road and the foreshore of Back Bay, and the reclamation work in Back Bay itself was vigorously pushed forward by the Back Bay Reclamation Company, who expect to be able to complete the breakwater and an embankment across the Bay before the close of 1866.

44. *Colaba Terminus.*—The plans for the Colaba terminus and general offices have been prepared; certain minor alterations which appeared desirable have been discussed with the representatives of the Railway Company. The principal buildings have been arranged so as to occupy land already existing, and will probably be commenced next season. The reclamation of the ground on the harbour side of the terminus is being carried out by the Executive Engineer for Reclamations.

45. *Overbridges in Bombay.*—The progress of the overbridges on the unopen line between Back Bay and Bellasis Road has been slow in the extreme, and the public has suffered considerable inconvenience from three of the principal thoroughfares being constantly blocked by material trains. The Grant Road overbridge is now, however, nearly completed, and will be opened for traffic before the monsoon. The Malabar Point Road bridge is nearly as far advanced.

46. *Grant Road Station.*—The passenger station at Grant Road has not been begun, and certain alterations have been suggested with a view to reducing the estimated cost which are still under consideration. One goods-shed has been completed, but the covered space is far from sufficient. The Agent fully counted on having a quantity of iron roofing avaliable for erecting sheds, but owing to the injudicious arrangement of the shipments in England the portions of roofing which have arrived cannot be made use of as they do not form complete spans.

47. *Works on open Line.*—Many new works have been carried out on the open line between Bombay and Ahmedabad, the most important of which will be briefly described.

48. *Doubling Line from Bombay to Andhere.*—A second line of rails has been laid from Bellasis Road to Santa Cruz, 8th mile, and opened for traffic as far as Bandora. The doubling

of the line to Andhere, two miles beyond Santa Cruz, has been pushed forward. The embankment across the Mahim creek has been completed for the double line, and a bridge of four 60-feet openings in that embankment removed and the gap filled up.

49. *Extra Sidings at Bellasis Road.*—Additional sidings have been laid down on the north of the Bellasis Road station and at the temporary junction with the G. I. P. Railway at Dadur. The designs for the permanent junction station of the two Railways have been sanctioned and work commenced.

Junction with G. I. P. Railway at Dadur.

50. *Workshops, Stores, and Mechanics' quarters at Parell.*—The workshops, mechanics' quarters, and stores depôt at Parell have been pushed forward with vigour. Two blocks of bungalows have been finished, and two more will be completed in a few weeks. The stores yard has been formed. The stores, warehouses, and part of the stores sheds will be covered in before the monsoon. The general arrangement of the workshops has been decided after full discussion, and the plans have been sanctioned by Government. The machine shop has been commenced as well as various minor works.

51. *Doubling Embankments in the swamp Districts.*—The embankments in the swamp districts at Bassein, the Veturnee River, and Dhanoo, and the embankment forming the south approach to the Nerbudda Bridge are being widened to the breadth of the double line, and the slopes protected with stone pitching. The work is in a forward state.

52. *Engine-changing Station and Sanitarium at Golwud.*—The proposed engine-changing station and mechanics' sanitarium at Golwud have been commenced. The works were sanctioned some months ago, but there was some delay in obtaining the land and making it over to the Company.

53. *Sidings at Kakra-Kharee.*—Government have sanctioned the construction of sidings at Kakra-Kharee, 1½ miles south of Surat station, for marshalling goods trains. This works is in progress.

54. *Doubling Line from Surat to Amrolee.*—Sanction has also been given to the double line from Surat to Amrolee, but this work will not be started till next season.

55. *Bungalows at the Bassein, the Veturnee, and the Nerbudda Bridges.*—The construction of mechanics' bungalows at the Bassein, the Veturnee, and the Nerbudda bridges have also been sanctioned, but the work has not yet been commenced.

56. *Improvements at Stations.*—Numerous improvements are being carried out at the various stations on the line, among which may be enumerated:—The addition of eight miles of sidings at stations. The provision of extra passenger platforms at Mahim, Anund, Neriad, Mehmoodabad, Baragree, and Surat. Complete engine watering arrangements at Nowsaree, Unclesur, Pallej, and Baroda. Permanent passenger stations at Sucheen, Sayen, Panolee, Etola, and Baroda. Additions to existing passenger platforms sufficient to give 500 feet at 3rd and 4th class and 800 feet at 1st and 2nd class stations. Screened urinaries for native passengers at all stations. Pallisading round passenger platforms and goods yards. Goods sheds at Anund and Wassud; goods platforms at 3rd class station south of Bulsar, &c. Considerable progress has been made with all the above works, and, except the Baroda station, which is a large work, and will hardly be finished for a year, almost all might be completed in two or three months.

57. *Doubling superstructure on Iron Bridges.*—The second line of superstructure will have been erected, it is hoped, before the rains set in across the Bassein, Veturnee, Par, Nerbudda, Mhye, Watruck, and Meshwa bridges, 254 spans in all.

58. *Bassein Bridges.*—The piers of the Bassein bridges have been examined by divers during the past season, and all defective bolts and bracings found have been replaced. With a view to ascertain whether the bolts in the inside flanges below ground were affected by salt water, the Chief Resident Engineer had one of the down-stream piles taken up and examined, and found the damage to the bolts was scarcely perceptible, though those connecting the external flanges became quite rotten in a couple of years. It would appear from this that the inside flanges are sufficiently protected by the concrete filling, which works into the joint and makes it water-tight, but further examination is being made.

59. *Veturnee, Par, and Nerbudda Bridges.*—At the Veturnee, the Par, and the Nerbudda bridges the piles have been examined in like manner. At the Nerbudda it was found that the bed of the river round three of the piles had been scoured out considerably; these have been protected by a solid filling of concrete in 8 feet cylinders sunk 9 feet in the river bed.

60. Two piers in the centre of the span of 90 feet in the Nerbudda bridge which were washed away, one in 1864 and the other in 1865, have been re-erected, and the 90-feet girders will be removed and replaced by 45-feet girders as soon as the second line of rails is laid and the traffic can be directed over it.

61. *Measures proposed for strengthening large Iron Bridges.*—After much discussion the following measures were recommended for strengthening the larger iron bridges:—

1*st.*—To remove the strut piles and substitute a vertical pile for each. The five piles of the pier to be connected at top by a continuous cross girder of sufficient strength to support the weight of the roadway should any one pile give way. The horizontal bracings to be double throughout the pier.

2*nd*.—To introduce a pier of 11 piles, forming a cluster, at every 6th span. The piles to be connected by double bracings, and the up-stream face of the pier covered with sheet iron to prevent the accumulation of drift.

3*rd*.—To protect the up-stream piles from below by means of vertical teakwood fenders 24 inches square strapped to them. Similar fenders to be fixed to any other piles against which the stream sets.

4*th*.—It was further recommended that throughout the Mhye and the deep water portion of the Nerbudda bridges spans of 180 feet should hereafter be introduced in place of the present 60-feet spans, supported on clusters of piles; that the cast iron should in future be subjected to a toughening process; that all new piles should be cast with socket joints, so that the security of the joints might not be entirely dependent on the soundness of the bolts, as now, and that endeavours should be made to procure some material for the bolts which should not corrode so rapidly as wrought iron when in contact with cast iron under water.

62. *Progress made with new works at Mhye and Nerbudda*.—The 1st and 3rd proposals have been sanctioned and partially carried out at the Mhye bridges. The difficulty of introducing the continuous cross girders is, however, considerable, and but little progress has been made with this part of the work. The up-stream vertical piles have been screwed throughout the Mhye bridge, and a few have been put in at the Nerbudda, but they will have to be secured temporarily for the monsoon by short roadway girders at top and double bracing throughout, or failing this will be dismounted as far as low-water level. Double longitudinal tie rods with screw shackles will be employed to connect the heads of the up-

stream vertical piles together from pier to pier to prevent oscillation. It has been proposed to form roadways for cart traffic on either sides of the Railway across some of these bridges; they would be of great use to the country; they would tie the outer piles together firmly, and would not be expensive.

63. One or two of the cluster piers have recently been commenced at the Mhye bridge, but the work has not progressed far; and as it is hazardous to allow any piles which are incompletely secured to stand during the monsoon floods, the Chief Resident Engineer has directed that no fresh work shall be started after the 15th May, and that all piles the completion of which before the rains set in is doubtful shall be dismounted.

64. *Subject of large Bridges referred to Secretary of State for India.*—It must be added that the whole subject of these bridges has been referred to the Secretary of State for India, and that it will depend upon the instructions that may be received from England whether the proposed work above mentioned will be fully carried out or other measures taken. Similar works have been proposed for the Taptee, Veturnee, and Bassein bridges.

65. *Alteration to Watruck Bridge.*—The piers of the Watruck bridge are being altered, as they stand at an angle with the line of the stream. The down stream piles have been shifted to their proper position, and the second line of superstructure is being laid across; and as soon as the traffic can be turned on to the down line the up-stream piles will be shifted in a similar manner. The work will, it is hoped, be completed before the monsoon.

66. *Surveys of new Lines.*—Surveys have been made of the branch line from Ahmedabad *via* Veerumgaum to Wudwan, and of the extension of the main line from Baroda to Neemuch, and the plans are now under preparation.

67. *Maintenance of open Line.*—The cost of maintenance of the open line has been heavy. The actual cost per mile between Bulsar and Ahmedabad during the last half of 1865 was Rs. 1,506, and the estimate for the current half-year is Rs. 1,235. Between Bulsar and Bombay the cost per mile during the last half of 1865 was Rs. 1,618; the estimate for the current half-year has not yet been sanctioned.

68. *Sleepers.*—The cost of renewing sleepers, large numbers of which are decayed, is very great. None of the Indian woods have proved durable except "teak," and in some cases "red eyne" Teak sleepers now cost from 5 to 6 rupees a piece. Creosoted Baltic fir sleepers have been used on the Baroda Railway in considerable numbers and are found to last well; they cost about $4\frac{1}{2}$ rupees landed in Bombay, and the Company have received a small supply from England during the year. The London Board of Directors have also sent out a supply of Greave's pot sleepers, which it is proposed to lay down on the Northern Divisions of the line. The G. I. P. Railway Company are laying down pot sleepers in large numbers, and the Baroda Company will have the benefit of seeing them tested this season. With the sand ballast of the northern districts of Gujarat there is every reason to believe they will be found to form a smooth and durable road.

69. *Iron Bridges.*—The repairs necessary to iron bridges contributed considerably to swell the maintenance charges, and the establishment charges are also high but are being reduced by degrees.

70. *Fences.*—The growing fence, except between Baroda and Ahmedabad, where there is a fair "toor" hedge, is for the most part in very bad order in spite of the enormous sums spent upon it, and there have been repeated accidents from cattle straying on the line, though none of them fortunately have been attended by injury to passengers or the Company's

servants, and the cattle-guards have generally been sufficient to prevent the trains leaving the rails. In two instances, however, during the year trains were thrown off the line by cattle, and more or less damage done.

71. The Company have at last determined upon putting up wire-fencing in the worst places, and the Agent purchased during the year about five miles of good wire-fencing in Bombay, and the Board sent out about thirty miles of wire-fencing from England. The latter is, however, very inferior, and though low priced will probably prove an expensive article in the end. Where the babool has thriven it will be possible to dispense partially with upright posts as the wire can be stretched between the trunks of the trees.

72. *Locomotive Department.*—The head-quarters of the Locomotive department are still at Amrolee, but will probably be removed to Bombay next year, by which time the workshops at Parell will be in a forward state. Eight engines, 12 passengers vehicles, and 997 goods vehicles of sorts have been placed on the rails during the year, including goods waggons purchased and made up by contract. One thousand high-sided waggons indented for more than a year ago have not yet been supplied, but the Company have found the supply of waggons during the past season sufficient for their traffic. They have been short of engines, some which were expected in October 1865 having been lost at sea, and the ships bringing six others having been delayed at sea by adverse winds.

73. The repairs of locomotive engines have been heavy. The stock was in bad order at the commencement of the year, and failures of engines were very frequent, but during the past year the repairs have been done in a sound and thorough manner, and in spite of the engines having been greatly over-worked during the busy season (one driver relieving another on the same engine) failures have been less numerous than formerly.

74. The use of cattle-guards on the engines has been attended with success, but the spark-arresters have not answered: they are said to increase the consumption of fuel, and they do not altogether prevent the emission of sparks. The Company are converting some of the flat, open cotton waggons into covered waggons of an improved design, and others into low-sided cotton waggons for general purposes. Some of the 1st and 2nd class carriages have been altered and improved. A good roof-lamp has, after many experiments, been introduced by the Locomotive Superintendent, and arrangements are being made for lighting the 3rd class carriages.

75. The axle-boxes in use on the Railway still give much trouble, and require great attention. With attention they have been rendered safe in working, but the Locomotive Superintendent considers they will never be economical, and recommends their gradual conversion into others on a different principle. A new class of axle-box is being sent out from England.

76. The construction and maintenance of the stock is still effected under great disadvantages owing to the want of proper workshops. The completion of the works at Parell will remedy this evil.

77. *Capital cost of Line.*—The expenditure in India on Capital account up to the end of April 1866 amounted, as far as can be ascertained, to Rs. 4,18,29,236, equal to, at 1*s.* 10*d.* per rupee, £3,834,346. The English expenditure amounted on the same date to £2,435,875, and the total expenditure may be put down at £6,270,221.

78. *Estimated Capital expenditure.*—The estimated expenditure in India from Capital is entered in the Budget for 1866-67 at about £530,000, but this will not be sufficient to complete the works, including the Colaba Terminus and improvements to iron bridges, and it will not be safe to estimate the final cost of the Railway, including 10½ miles of

double line already sanctioned, and four lines between Grant Road and Colaba, at less than £7,000,000.

79. *Earnings.*—The gross earnings from 1st May 1865 to 30th April 1866 amounted to Rs. 21,57,002 from coaching and Rs. 21,75,493 from goods—total Rs. 43,32,495, or Rs. 14,158 per open mile, the length of the line being 306 miles.

80. *Expenses during* 1865-66.—The expenses from 1st May to the 31st December 1865, up to which date the half-yearly accounts have been rendered, amounted to Rs. 14,85,313, and are estimated at Rs. 9,25,000 from that date to the 30th April 1866, giving an average of Rs. 7,877 per mile for the year.

81. *Net Profits and Return on Capital.*—The net profits therefore, if the above estimate is correct, were Rs. 19,22,182, or Rs. 6,262 per mile, and returned at £3·39 per cent. on the Capital expended on the open line up to the 30th April 1866, which is estimated to have amounted to £5,200,000.

82. *Future prospects.*—Assuming that the line will cost £7,000,000, and that the accumulations of guaranteed interest from the commencement of operations amount to £1,000,000, by the time it is completed, it will be necessary that the annual *net* earnings should amount to £480,000 to give the shareholders 5½ per cent. on their investments. Supposing the working expenses to be reduced to 50 per cent. of the gross receipts, the earnings will have to be more than double what they have been this year to yield the above return. The working expenses during the past year have stood at about 55 per cent. of the receipts.

83. *General review of Passengers and Goods Traffic.*—During the year 1865-66 the passenger traffic contributed 49 per cent. and the goods and miscellaneous traffic 51 per cent. of the total receipts. The Railway now almost monopolise

what passenger traffic there is between Gujarat and Bombay. The coasting steamers that used to ply from Surat to Bombay seldom run, and the native boats carry very few passengers.

84. *Development of Passenger Traffic.*—In the course of time no doubt villages will spring up along the southern portion of the line; there will be larger population and increased commercial activity, and travelling will be more popular among all classes of natives; but the "through" traffic is not likely to yield a much larger profit than it now does for some years to come unless the line is extended towards Central India.

85. *Local Passenger Trains.*—The local passenger traffic, however, might now be encouraged with advantage. Either from the 3rd class fare being too high, or the trains being inconveniently arranged and very unpunctual, probably from both causes, the lower classes in Gujarat do not use the Railway much for short journeys. In fact the number travelling per open mile is lower than it was in former years before the fare was raised. The only immediate prospect of increased returns from passengers consists in developing this local traffic, and in the gradual increase of "Residential traffic" from the suburbs of Bombay, which are becoming populated by degrees by clerks in public offices and other persons of moderate incomes who are unable to afford the high charges for house rent in Bombay.

86. *Development of Goods Traffic.*—The goods traffic will certainly increase as the communications with the Railway by roads are improved.

87. *Water competition.*—The portion of the line from Jumboosur and Broach to Bombay has to compete with the coasting trade, and as the boats can carry at rates which would never remunerate the Railway Company, they obtain a large share of the traffic, especially at seasons when the winds are favourable and quick passages can be depended upon. Thus

from January to March last during the prevalence of the North-West monsoon a quantity of cotton was brought down by boats to Bombay, and the Railway did not carry more than 20 per cent. of the total quantity of cotton imported; while in March and April, when the wind shifted to the southward, the Railway carried from 60 to 70 per cent. of the cotton; but their "down" traffic, which had been in excess of the "up" traffic during the early months of the year, fell off in consequence of the wind being in favour of boats going from Bombay to Gujarat.

88. *Goods Traffic during Monsoon.*—The Railway would monopolise the traffic in the monsoon, but there being few roads little can be brought to the Railway till the rains subside, and thus the boats which begin to ply again in October obtain a share of the goods which have been stored up in the towns during the rains. The want of roads is being very gradually supplied under the Local Fund rules.

89. *Goods Traffic during* 1865-66.—During the year 1865-66 the weight of goods carried has been far larger than ever before owing to the line having been opened for goods to Bombay on the 28th August 1865, and the receipts have increased from Rs. 4,72,880 to Rs. 21,75,493, as not only was the average distance goods were conveyed greater, but the rates charged were considerably higher than formerly.

90. *Particulars of Passenger Traffic* 1865-66.—The number of passengers carried during 1865-66 was 4,790 per open mile, the number of miles run by passenger and mixed trains 1,437 per open mile. The earnings per Railway mile were Rs. 7,049 and per train mile were Rs. 4·90, and the average distance passengers travelled—

1st class	.....	72·66 miles.
2nd do.	.....	65·96 do.
3rd do.	.....	57·79 do.

91. These results compare favourably with those of previous years, except as regards the receipts per train mile which fell off in consequence of the increase in the number of trains. One fast train ran both ways between Bombay and Ahmedabad daily consisting of passenger carriages only. Mixed trains were run each way between Surat and Ahmedabad, and Surat and Bombay; a local mixed train each way between Baroda and Ahmedabad, and another between Bombay and Bassein. Possibly the Company would have saved by running fewer trains, but as all that was done was to attach a few carriages to the goods trains the working expenses cannot have been much higher than they would have been had no extra trains been put on, and the public were benefited at a small sacrifice. It is sometimes laid down that the receipts per train mile give the measure of the judgment displayed by the management, but this must be accepted with a great deal of qualification, as it is an Agent's business to endeavour to encourage and develop the traffic, and he, must constantly offer facilities which are in advance of the actual demand.

Number of Trains.

92. In the case of the extra trains in the Baroda Railway in 1866-67 the low return per train mile has been satisfactorily accounted for, and it has been shown that the working expenses were not sensibly augmented; but the mixed trains were so slow, so unpunctual and inconvenient, owing to the delays from heavy loads, shunting, &c., that, as above noticed, the local traffic, which they were principally intended to accommodate, did not increase at all, and it is hoped that as soon as the Company are better off for locomotive engines they will organise a separate local passenger train service in the northern districts. Whether a reduction in the 3rd, class fare will also be found necessary remains to be seen.

Unpunctuality and inconvenience of Mixed Trains.

93. *General character of the Traffic management.*—The management of the traffic has altered for the better in the past year in every particular. As regards the passenger traffic the unpunctuality of the mixed trains has been already noticed; the through trains, however, have kept very fair time. Although the first class traffic does not at present pay the Company, the Agent has, with a liberality which deserves to succeed, ordered more first class carriages. The supply of 2nd and 3rd class carriages is generally sufficient, and, except on extraordinary occasions, such as fairs or holidays, there is no complaint of over-crowding.

94. *Outside Porters.*—At all large stations outside-porters should be kept, who should wear badges, and no other coolies should be admitted on the platform; this plan is being carried out on the G. I. P. Railway line, but has not yet been started on the Baroda Railway.

95. *Police.*—Under the new organization lately sanctioned by Government it is hoped that the police at the stations will become of real service instead of being a constant annoyance to the native passengers. Hitherto their general plan of action seems to have been to bully and push about the poorer classes, and exact bribes from the rich.

96. *Accommodation at Stations.*—The stations, except the temporary stations at Bombay and Baroda, are convenient and well arranged; but sufficient attention is not paid to their cleanliness, and many instances have occurred of the 1st and 2nd class waiting-rooms being converted into quarters for overseers or stationmaster, and of the furniture intended for the use of passengers being removed. Certain refreshment-rooms are also, it is said, occasionally used as taverns by the European subordinates. The power now confided to the Agent of revoking the spirit licence of the keeper of the refreshment-rooms for misconduct will, it is hoped, help to bring about a better state of things; but

the Traffic department, especially the District Superintendents, ought to be held responsible for the state of the stations and for the prevention of disorder. If they always did their duty and reported every instance of misconduct that came to their notice irregularities would be less frequent.

97. *Want of Engine power.*—As regards the goods traffic the Company have suffered from the want of locomotive engines. The stock of waggons could not be fully worked in consequence, and the Company probably lost a good deal of traffic.

98. *Carting Agencies.*—The Agent has established carting agencies at all the principal stations, and has watched the working of the goods rates most carefully where the Railway and the coasting craft came into opposition, and varied them from time to time, and the result is on the whole most encouraging.

99. *Practice of selling Goods Waggons.*—The practice of selling the waggons which used to prevail has probably been checked to some extent by the large additions made to the rolling stock, and the greater care exercised in its distribution. It has been proposed that daily returns should be required from every station by telegraph showing number of waggons available, and the quantity and description of goods brought for transport, and that the distribution of the waggons to the several stations should be arranged by a central controlling authority to whom these returns would be sent.

Distribution of Waggons.

100. *Compensation claims.*—The amount paid for claims is much smaller than during the past year. A disastrous fire occurred among some goods and cotton trucks in March last at the Grant Road Station which cost the Company about Rs. 25,000 for compensation, and there were two or three instances of goods catching fire in transit, which helped to swell the sum paid, but the doubtful claims and rob-

beries have decreased owing to improved arrangements and greater watchfulness. Seventy-eight accidents have been reported on the open line during the year. The following tables give the detail :—

Risks in working.

Accidents attended with Injury to life or limb.

	From causes beyond their own control.		From their own carelessness.		TOTAL.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers.....	..	1	1	2	1	3
Railway Company's servants..	6	2	19	16	25	18
Trespassers	1	..	9	..	10	..
Total....	7	3	29	18	36	21

Causes of Accidents.

	Attended with Injury to				Unattended with Injury.	REMARKS.
	Life.	Limb.	Rolling Stock.	Permanent Way.		
Defects in stock.....	..	..	..	....	....	
Do. permanent way ..	..	..	..	6	....	Injured by floods.
Do. fencing	..	..	3	1	2	Cattle on line.
Facing points.	..	..	4	3	....	
Collision.....	2	1	5	....	....	
Culpable negligence on part of Railway Company's servants	3	2	9	4	1	
Fires	..	..	6	1	....	

101. *Government control and general management.*—Some changes have been carried out during the year in the general system of management, the method in which the Government control is exercised, and the authorisation and audit of expenditure.

102. *Meetings of Government and Railway Officers.*—Since April 1865 periodical meetings of the Railway and Government officers have been held for the discussion of Railway matters and despatch of business. From the 1st January 1866 certain powers of sanction were vested in the Consulting Engineer, subject to the confirmation of Government. Hitherto the system has worked satisfactorily and lessened correspondence.

103. *Chief Auditor and Accountant.*—A Chief Auditor and Accountant was appointed by the Company in March 1865 with whom the whole control of the account and audit department now rests. The good effects of this appointment are shown in the improved state of the books and accounts; but owing to the laxity and utter want of system with which the "Accounts department" was formerly conducted some time must yet elapse before the accounts will be brought into thoroughly good order, and all arrears disposed of.

104. *Government Examiner of Accounts.*—With the view of expediting the Government audit an Examiner has been specially appointed who attends at the Railway Company's office, and who examines and checks the accounts previous to the final audit of the Consulting Engineer, and follows the various entries through the Company's books, and keeps a complete record of all transactions. This plan is for the present experimental, but it bids fair to succeed, and will in this case be adopted permanently.

105. *Concluding Remarks.*—The marked improvement in the management of the various departments during the year

is due in no small degree to the personal exertions of the Agent. It must be added that he has been cordially supported by the heads of departments in introducing needful reforms, and that the relations between the Railway Company and Government have never been on a more satisfactory footing than at present.

SIND RAILWAY.

CAPITAL.

106. The expenditure on new works during the year was small, amounting to a little more than one lakh, of which Rs. 11,302 really appertained to work done before the line was opened for traffic. The chief part of the money was laid out in providing additional waterway across the line. Among the works may be mentioned the rebuilding of Kharaseer Bridge. The foundations of the old bridge of four 40-feet arches in stone were insufficient, and the piers in 1864 showed signs of failure. The rebuilding of the bridge was decided upon, and the new bridge was completed and opened for traffic on the 19th December last. The cost of the work was Rupees 40,353-14, of which Rs. 13,351 were charged to Capital.

Kharaseer Bridge.

107. *Mayting Culverts.*—Two culverts near Mayting were also found to be in a very bad state after the rains of 1864. These have been rebuilt with the addition of three 8½-feet openings to each culvert, the original culverts having had but one opening each. The cost of this work was Rupees 16,320-15, of which Rs. 11,356-15 was charged to Capital.

108. *Rhode Bridge.*—At Rhode the waterway provided was so insufficient that the addition of an 80-feet span to the existing bridge was found necessary, and at the same time it was decided to raise the whole line 3 feet at this point. This work

was commenced towards the close of 1865, and at the close of the official year was well forward.

109. *Groynes.*—In the beds of Mulleer and Bahrun rivers stone groynes were constructed to direct the stream fairly under the viaducts, as the continued set of the water against the right bank of each of these rivers was dangerous to the abutments.

110. *Stations.*—Very little work has been done to the stations. A small permanant station was sanctioned for Mayting, and the work is in progress. All the stations except this new one at Mayting and that at Joongshaire are temporary.

111. A few additions have been made to the station accommodation at McLeod Road.

112. *Water Supply.*—A new well has been sunk at Kotree. The water obtained from the old well was the worst on the line. The new well is much nearer the river, and the water is very good.

113. The other Capital works do not call for special mention. Some petty additions were made to the shops, a small platform was built at Keamaree, and several other small works were carried out.

REVENUE.

114. The gross earnings of the line during the year were Rs. 9,73,000, and the expenditure about Rs 8,44,910.

115. The following passengers and goods were conveyed :—

2,335 1st class passengers.
5,375 2nd do. do.
123,654 3rd do. do.
4,876,170 maunds of merchandise.
679,520 do. of Railway materials.

116. A return of rolling stock on the line is attached.

117. Traffic was very slack during the first few months of the official year, but it increased rapidly towards the close of 1865, and in January and February of the present year it was greater than at any previous period since the line has been opened.

SIND RAILWAY.

RETURN of Rolling Stock *for the official year ending* 30*th April* 1866.

	COACHING.											MERCHANDISE.											TOTAL.		
		CARRIAGES.					WAGGONS.																	
	Engines.	Saloons.	First Class.	Second Class.	Third Class.	Composite.	Carriage Trucks.	Break-Vans.	Horse Boxes.	Powder Vans.	High Sided.	Low Sided.	Covered Goods.	Cotton Waggons.	Coke.	Cattle Trucks.	Tanks.	Break-Vans.	Rail Trucks.	Timber Trucks.	Break Trucks.		Ballast Waggons.	Engines.	Vehicles.
Total stock on 1st May 1865.....	26	..	6	12	20	6	5	5	10	6	18	297	113	49	..	..	26	10	10	10	3		107	26	499
Added during the year.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..
Disposed of during the year.....	*1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		†12	1	..
Total....	25	..	6	12	20	6	5	5	10	6	18	297	113	49	..	..	26	10	10	10	3		95	25	499

* Returned to Punjaub Railway.
† Sold.

INDUS VALLEY SURVEY.

118. From the commencement of the official year till November the whole of the engineers and surveyors were employed in Kurrachee getting the field work of the previous season into shape; when the cold weather set in the whole staff left for the Hydrabad districts, where they were engaged in marking out the line on the left bank proposed by Mr. Brunton until the close of the official year. Mr. Brunton's report on this work has not yet been received.

119. In accordance with the orders of Government six months' notice was then given to all the members of the survey (excepting Mr. Brunton), and almost all have now left Kurrachee.

INDUS STEAM FLOTILLA.

CAPITAL.

120. At the commencement of the official year Capital expenditure was at a minimum. A small establishment was kept up at Keamaree to look after the Richardson, Duck & Co.'s contract vessels, three of which were on the stocks and two in the water, and to protect the large quantity of stores lying about, but there was no real work on hand. But in September the material of a new steamer and two barges arrived from England, and the erection of these vessels was proceeded with vigorously. At the close of the official year they were nearly complete. The expenditure for the year was about Rs. 70,000, exclusive of course of the value of the material and stores of the new steamers and barges.

121. During the year the Agent and Superintendent visited England, and while he was there arrangements were made for the addition of three other steamers and six new barges.

REVENUE.

122. The gross earnings of the Flotilla during the year

were Rs. 7,59,025, and the expenditure Rs. 6,44,322. The fleet conveyed—

259 1st class passengers.
2,756 2nd do. do.
4,790 3rd do. do.
536,003 maunds of merchandise.

123. The work was carried on throughout the year without loss or accident. There were two departures from Mooltan and two from Kotree monthly in correspondence with the mail steamers between Bombay and Kurrachee, and many extra vessels were run.

124. A statement of the strength of the fleet is annexed.

STRENGTH of the FLEET *on the River for the official year* 1865-66.

STEAMERS.			BARGES.		
Names.	Horse-Power nominal.	Registered Tonnage.	Description.	Names.	Registered Tonnage.
Stanley	120	295	Iron.	Shikarpoor	192
Havelock	110	194		Mooltan	192
Frere	110	194		Kurrachee	192
Outram	110	194		Simla	192
Indus	90	149		Umritsur	192
Laurence	110	194		Lahore	192
Sir Charles Wood	120	295		Hydrabad	192
Tug C.	40	67		Tatta	182
Tug D.	40	67		Sukkur	182
Tug E.	15	43		Roree	182
Tug F.	15	43		Bukkur	182
Phara	65	243	Wooden.	Cursetjee	89
				Ethersey	134
			Corrugated Iron.	Seven 1st size, numbered 1 to 7	84
				Four 2nd size, numbered 1 to 4	43
				Ten 3rd size, numbered 1 to 10	35
				Ferry Barge*	35

Aggregate Tonnage.

Steamers ..... 1,978 | Barges 3,442

* This is not the property of the Company.

MILITARY.

Arms for Native Troops.

As noticed in the last year's Administration Report, Her Majesty's Government having disapproved of the issue of Enfield Rifles to the 2nd Belooch Regiment prescribed the Brunswick Rifle for such Native Infantry Regiments as should carry rifles at all. The Officer commanding the 4th Regiment Native Infantry or Rifle Corps and the Chief Inspector of Musketry have urged the following objections to the issue of the Brunswick Rifles to that Regiment. Sir C. T. VanStraubenzie, Commander of the Forces, concurring in the objections, strongly advocated the arming of the 4th Regiment (as an exceptional case) with the ordinary Rifles. The subject is now under the consideration of Her Majesty's Government.

Objections by the Officer commanding the 4th Rifles.

"The objections to the 'Brunswick' Rifle are—*first*, that after firing four rounds two hands have to be used to ram down the bullet. Colonel Honnor, who commanded this regiment many years, had country bullet-moulds made so easy that the ball rolled down, preferring ease in loading to good shooting under difficulties. *Secondly*, it is impossible to load kneeling down in line.

"As I conclude it is the object of Government to have the regiment as efficient as possible, I cannot but trust the present order will not be carried out. There can be no harm in allowing the regiment to retain their present weapon. The change thereof has created an uncomfortable feeling of distrust which should be avoided.

"I most respectfully and earnestly beg the support of the Lieutenant-General commanding the Forces in this case."

Objections by the Chief Inspector of Musketry.

"I have now the honour to report that by dipping the patch which surrounds the ball into mutton fat, care being taken to hold the Rifle when in the act of loading as perpendicularly as possible, to prevent the powder from sticking in the grooves, there will be difficulty in loading only when the diameter of the ball is enlarged, as will occasionally happen when not carefully cast. The natural result of loading kneeling is that a large portion of the powder sticks in the fouling in the sides of the barrel, and the gain in safety to the firer is more than counterbalanced by weak and uncertain fire. It is therefore never allowed even with the Enfield Rifle (the ball of which is so much smaller than the bore) when it is practicable to load standing. With the Brunswick Rifle it should be altogether discarded.

"Having procured two Brunswick Rifles with ammunition from the Ordnance Department, I fired thirty rounds, using patches greased with mutton fat, of which three rounds only necessitated the use of two hands in loading. With the second Rifle, no lubrication having been applied, it was with great difficulty the loading could be performed at the fifth, and the bullet was only got down by the united exertions of two men on the eighth round."

Query put to the Chief Inspector of Musketry.

"Whether it would not be better to reduce the diameter of the Brunswick ball in the smallest degree, and substitute oil-cloth in order to avoid greased patches?"

Reply.

"I have the honour to point out that by reducing the diameter of the Brunswick bullet the accuracy of its flight

would be impaired, and as oil possesses little lubricating properties (more particularly vegetable), and rapidly evaporates, requiring the patches to be constantly re-dipped, I am of opinion that it would be more advisable to adopt the plan of greased patches, as previously recommended. Should the use of the grease be considered objectionable for Native troops, I see no alternative remaining but to adopt the suggestion contained in your memorandum under reply, and reduce the diameter of the ball one seven-hundredths of an inch, which would enable the rifle to be discharged from six to ten times oftener than at present."

EMPLOYMENT OF OFFICERS IN OTHER THAN GOVERNMENT OFFICES.

2. With reference to the question of the employment of officers in posts not strictly pertaining to the Government service, such as those under the Municipality of Bombay, adverted to in the last year's Administration Report Her Majesty's Government have decided that officers may hold such employment during leave taken under the Regulations of the Service, but the time passed in such employment will not be recognised as qualifying for pension under those Regulations; further that the officers cannot have indefinitely extended leave of absence from duty to enable them to hold such offices for so long as they may not be wanted for other than general duty.

3. In connection with this subject it may be noticed that the Government of India have declined to sanction a proposal for the formation of a Superannuation Pension Fund, under the guarantee of the General Revenues of India, for the benefit of officers holding Municipal or other quasi-Government appointments not paid for out of the Imperial Revenues, and who may consent to pay a percentage on their salaries for a pension from the General Revenues.

REDUCTION OF THE MILITARY FORCE.

4. On the return of two regiments of Native Infantry from China the Government of India inquired whether the Military force of this Presidency could not be further reduced. This Government proposed the conversion of two Light Field Batteries into Garrison Batteries, effecting a saving of Rs. 2,21,654 per annum, the reduction of two Batteries of Horse Artillery, at a saving of Rs. 4,45,726, of one Regiment of European Infantry costing Rs. 8,18,829 per annum, and one of Dragoons costing Rs. 7,15,607, making a total saving of Rs. 22,01,816 per annum.

5. Copies of Minutes recorded by Sir Bartle Frere and the Honourable B. H. Ellis on the subject form Appendices A and B.

6. In regard to the Native Cavalry of this Presidency the Government of India suggested a numerical reduction of 30 or 40 men in all or in some of the corps in order to assimilate their strength to that of the Cavalry regiments of the Bengal Army. For reasons explained in the following Memorandum and the Minutes of His Excellency Sir Bartle Frere and the Honourable B. H. Ellis, it was not deemed expedient to adopt the proposal of the Government of India:—

Memorandum by Secretary Colonel W. F. MARRIOTT, *dated 28th October* 1865.

"Lord Elphinstone in May 1860 proposed a reduction of 1,500 men of our Native Cavalry, retaining seven Corps of 769 men each.

"Subsequently Sir George Clerk's government, in October 1860, proposed instead, ten Regiments of 500 men each.

"The Government of India, in November 1860, proposed a strength of 300 private sowars and of 379 in all.

"This Government, deferring to the wishes of the Government of India, organised 12 Corps (exclusively of the Gujarat Horse) of 360 men each.

"The Secretary of State in February 1861 objected to this, and prescribed a scale of 420 sowars, and 79 native commissioned and non-commissioned officers, making 499 in all.

"Finally it was decided by the Government of India in April 1862 that 'the Native Cavalry in all the Presidencies should, as far as possible, be similarly organised as regards strength and establishments,' and that 'the Bombay Cavalry should be assimilated to the standard laid down in Bengal,' and that it 'should be at once re-formed into nine Regiments of 420 sowars each.'

"The Bombay Government proposed a reduction of one Regiment, and organised its Cavalry accordingly in eight Regiments of 499 men each.

"The Government recently proposed and effected a reduction of another regiment, and has now seven of 499 men each, as originally prescribed, and adopted for the sake of assimilation to the standard of the Bengal Presidency. But although that number was prescribed in 1862 as 'the standard laid down in Bengal,' it does not appear to have been adopted in Bengal,* although apparently it was adopted and is maintained in the Punjaub Cavalry.†

"This Government is now asked whether a numerical reduction of thirty or forty men might not be

* The Bengal Cavalry consists of Native Commissioned and Non-Commissioned 79
Sowars 384
463

† The Punjaub Cavalry consists of Native Commissioned and Non-Commissioned 79
Sowars 420
499

made in all or in some of the corps so as to assimilate their strength to that of the Cavalry regiments of the Bengal Army.

W. F. MARRIOTT, Colonel,
Secretary to Government."

Minute by His Excellency Sir H. B. E. FRERE, *dated* 30*th October* 1865.

"It will be seen that after a great many changes, and proposals for change, the Bombay Native Cavalry was finally assimilated in gross numbers and cost to the Punjaub standard.

"I prefer the present standard upon the whole to the new Bengal standard proposed by the Government of India.

"Besides which I think any change which does not proceed on some manifest fixed principle and effect a really large saving of expense is objectionable, and fraught with possible evil consequences of great magnitude.

"There can be no doubt the Native Army, both men and officers, is now less well content with its position and prospects than at any time within living memory.

"This is due partly to the pay being less when compared with present prices than it used to be; but more to the constant changes in system, strength and pay, and to the consequent feeling of insecurity which pervades all ranks.

"This is a very dangerous feeling to get root in a mercenary Army, and nothing fosters it so much as constant small changes.

"I do not think the change now proposed will effect a saving at all adequate to the risk of perpetuating a feeling which must in time die out, and I would therefore prefer to leave the Native Cavalry as they are, and to make savings in another mode which we have already submitted to the Government of India.

H. B. E. FRERE."

Minute by the Honourable B. H. Ellis, *dated* —— *October* 1865.

"I have already referred to the feeling of uncertainty which is caused by constant reductions, and no branch of the Native Army has been subjected to more frequent changes than the Cavalry.

"On grounds of policy therefore I would oppose any further present reductions, and if it be desired again to alter the standard so recently fixed, and to lower the numerical strength of all the Cavalry regiments in India to that which prevails in the Bengal Cavalry, I would earnestly request that the reduction may be gradually effected by not filling up vacancies, and that whatever be resolved on, the men now in the service may not be thrown on the world with a gratuity or pensionary pittance.

B. H. Ellis."

Byculla Schools.

7. During the year the Bombay Education Society represented the inability of the Military Asylum adequately to provide for soldiers' children owing to a large deficit of its income, and requested an annual subsidy equal to the maintenance of all Military children in the School, basing its claim on the guarantee given to the Society by this Government in 1821 in respect of the cost of all children admitted to the Society's Schools on the foundation of the Military Asylum established in that year. Government did not see sufficient reason, either in the nature of the Government guarantee or in the actual necessities of the case, for the extension of the proposed grant, but with the sanction of the Government of India have resolved to make payment with retrospective effect for 1864 for those properly admitted under the strict rules of the Asylum.

8. For reasons explained in the subjoined extract from a Resolution passed by Government on a report by a Commission appointed to advise the Government on the desirableness or otherwise of removing the Military Asylum from Bombay, this Government submitted in March last, for the consideration of the Government of India, a general scheme for establishing in England a Military Asylum for the children of soldiers in India subscribing thereto according to prescribed rules :—

"The conclusions" (arrived at by the Commission) "are that it is 'desirable that the main bulk of the Schools be removed to Poona, a Branch Establishment being left in Bombay, and provision being made for the residence of a portion of the children at some Hill Station during the hot months;' and secondly, that it is 'desirable that an institution should be formed in some part of England for the education of orphan and friendless children of pure European blood.'

"The Commission state that they are precluded from directly recommending any plan that implies not only cöoperation but initiative measures on the part of the Education Society, because they are not in a position to know what the views of the Society with regard to such a plan might be. His Excellency in Council hoped that when he assented to the Society's proposal that it should name one-half of the Commission the Society would consider itself to be fully represented therein, so as to ensure its full cöoperation to give effect to any well established conclusions, and to obviate any such hindrance as indicated by the Commission's statement above quoted.

"After careful deliberation of this matter, His Excellency in Council, having regard to the fact that the Military Asylum comprises the largest part of the children of pure

European blood for whom an English Asylum is recommended, and to the administrative difficulties—financial and other—and the consequent delays which would inevitably attend joint action by the Society and Government, thinks that the present connection of the Military Asylum with the Bombay Education Society should cease so soon as by other means the care and education of the children of the Military Asylum can be provided.

"For this purpose His Excellency in Council will recommend that an Asylum be established in England solely for the children of soldiers who shall subscribe according to the rules of the Military Asylum, with such modifications as may be needful, and that it be wholly maintained by the State.

"It would still be necessary to have some Asylum in India for those too young to be sent home immediately, or whose parents desire to keep them in India whilst theirselves reside there, or for those only needing the protection of the Asylum temporarily, as when a regiment goes on field service. Until the numbers and necessities of these classes should be known by experience, the Bombay Education Society would doubtlessly continue to receive these on adequate payment by the Government.

"The excellencies of this plan are manifold. The education of British orphans in England instead of in India would advantage in the highest degree every purpose which calls for the State's care of them. The preservation of their lives, their physical and moral growth, and consequently their welfare and usefulness, the great mitigation of the domestic anxieties of the married soldier and his wife in India, giving consolation to them and more happiness and dignity to their position, these things, in themselves most important, would be helped in such large measure that it is not easy to overstate the value of the Commission's recom-

mendation, and the beneficent consequences which may be hoped from it.

"His Excellency in Council is not aware of a single objection. Even the mere money cost per child would probably not exceed that which, under the present system, the State would soon incur, because the Government is pledged to meet in future the full cost to the Society of the Military Asylum. The transport of the children to England will practically be without cost, as the Government Steam Transports for the periodical relief of the troops will provide the means at no greater cost than their maintenance on shore. The cost of the site, building, and outfit of the new Asylum in England, estimated according to the inquiries of the President of the Commission at £20,000 for two hundred children, would not be wholly additional, because the present accommodation in Bombay and Poona is very inadequate, the Military Asylum occupying a great part of the Society's Buildings to the exclusion of other objects of its bounty, and the State would have to contribute largely to additional buildings here, whilst the recent apprehension of the demands of sanitary science would certainly compel further expenditure of the same kind, of which the State would bear its share. So that the utmost cost is the difference between the cost of additional Buildings here and a new Asylum in England, added to the difference (if indeed, notwithstanding the additional controlling establishment, there would eventually be any unfavourable difference) between cost of maintenance in India and in England.

"The proposed Asylum in England could also facilitate the Commission's proposal, that the greater portion of the Bombay Education Society's Schools should be moved to Poona, with provision for the residence of a portion of the children at a Hill Station during the hot season.

"To the Bombay Education Society's work, separated from the Military Asylum, the Government has no more direct relation than to any other public charity, and His Excellency in Council does not wish to interfere with the Society's responsibility. Only he would urge the Society to weigh carefully the deliberate conclusion of its own selected representatives, the large testimony by which it is supported, and the fact that the very appointment of the Commission was the result of a conviction not hastily entertained by a few persons, but growing from year to year, and forcing itself upon the Society and upon Government, that for the greater part of the children a more healthful climate than Byculla could be and ought to be provided, a conviction now confirmed by the most complete inquiry which the Government would procure.

"Such facilities for this purpose as the Government can offer to the Society will be readily given, and His Excellency in Council believes that the public interest in the Society's Schools will be found sufficiently helpful to carry out any thorough action of the Society for the perfection of its beneficial charity."

STUD REPORT.

9. Appendix C is a report by the Principal Veterinary Surgeon for the year 1864-65, showing the services of the Government Stud Horses in this Presidency, the present number and distribution of the Horses, and the number still required.

STRENGTH OF THE ARMY.

10. The strength of the Bombay Army of all ranks was—

		On 1st May 1865.	On 1st May 1866.
Artillery	European	2,531	2,546
	Native	272	264

		On 1st May 1865.	On 1st May 1866.
Cavalry	European	1,084	1,058
	Native	3,552	3,570
Sappers	European	29	16
	Native	571	573
Infantry	European	8,233	9,166
	Native	20,866	20,837

QUARTERMASTER GENERAL'S DEPARTMENT.

11. The following is a report of the administration of the above Department for the past official year, submitted by Lieut. Colonel R. Phayre, the Quartermaster General of the Army:—

"Since May last year we have been unremittingly engaged in giving effect to the orders of Government and His Excellency the Commander-in-Chief in regard to the improvement of the cantonments as well as the quarters of the troops both European and Native.

Increased dormitory space.

"2. In order to admit of the European troops having a space of 90 feet per man in barracks, it became necessary to erect temporary quarters for 1,190 men, which will be occupied until the requisite amount of permanent barrack accommodation can be provided.

No. 2956 of 9th August 1866.
No. 3104 of 18th do.
Permanent Barracks still required.

"3. My reports as per margin show what is required throughout the Presidency in this respect.

Auxiliary and subsidiary accommodation.

"4. All the auxiliary and subsidiary accommodation of the Army, such as officers' quarters, family quarters, guard-rooms, cookhouses, bathrooms, has been inspected and proposals for its improvement submitted, some of which are in course of execution at a considerable cost.

"5. Increased means of recreation and amusement have been applied for and in some instances provided.

Recreation and amusement.

"6. The water supply of the European troops is under investigation, with a view to represent to Government the necessity for an increase of water-carriers pending the construction of the reservoirs, aqueducts, &c. that are under consideration.

Supply of water to European Troops.

"7. An improved system of lighting barracks and hospitals is under trial. At the large stations of Poona and Bombay we hope to introduce gas into the new permanent barracks.

Lighting Barracks and Hospitals with Kerosine and Gas.

"8. The conservancy of regiments and stations is undergoing reform. Buildings are being erected in some instances and altered in others to suit the new dry earth system.

Conservancy of Regiments and Stations.

"9. An order has been issued for a great but indispensable increase to the barrack and hospital furniture which is being carried out as fast as the supply departments can do so.

Increase proportion of Barrack Furniture.

"10. Conservancy establishments are under reorganisation with a view to the more efficient maintenance of cleanliness both in regimental lines and bazaars and out-lying parts of camp.

Increase of Establishments.

"11. Measures have been taken to prevent our cantonments and bazaars being overcrowded in future by persons

Measures to prevent overcrowding in Bazaars.

having no direct occupation in connection with the troops, where possible large numbers of squatters who had been inadvertently permitted to build huts in objectionable proximity to regimental lines have been ejected after receiving a fair compensation to enable them to move their property. In order to ensure constant attention to sanitary rules and improvements a large number of copies of the reports of the Sanitary Commission of the Presidency for 1864 and 1865 have been circulated to Commanding Officers and all subordinates for information and guidance, with strict instructions that the defects and their remedies brought to notice are to be noted and acted on at once.

Annual reports of Sanitary Commission circulated for general information and guidance.

" 12. The removal of a regiment of European Infantry to a new cantonment at Kirkee has been approved, and arrangements are in progress to commence the barracks there, and thus relieve the crowded cantonment of Poona of superfluous European troops.

Enlargement of the Kirkee Cantonment.

" 13. A hill station at Mander Deo and a seaside sanitarium at Teethul have been approved, and proposals to erect barracks at both are before Government; also the occupation of the hill fort of Taraghur near Ajmere has been proposed by His Excellency Sir Robert Napier as a quarter for two companies of the Nusseerabad Brigade and a sanitarium. The seaside sanitarium at Ghizree in Sind is to be rebuilt for 200 men. Aboo, Mander Deo, and Teethul were used this year with very satisfactory results—the two former for troops recently

Hill Station and Sanitaria. Mander Deo, Teethul.

Taraghur.

Ghizree.

Aboo.

arrived from England for whom barrack accommodation in the plains was not ready, the latter for the weakly men of the Royal Artillery at Ahmedabad.

"14. Arrangements are in progress for the erection of rest-houses throughout the Presidency for troops travelling by rail. These buildings will be a great comfort to the troops, and effect a great saving of valuable and expensive camp equipage.

Rest Houses for Troops travelling by Rail.

"15. The camp equipage of the Army has in a great measure to be renewed.

Camp Equipage of the Army.

"16. The last purchases of European soldiers' tents were made in 1858; but a large proportion is much older, and has lasted more than double the prescribed period of five years. During the last eighteen months the camp equipage of every station has been subjected to considerable wear and tear for cholera camps, standing camps for troops of other presidencies, and troops travelling by rail; camps to relieve overcrowded barracks at night; tents to relieve overcrowded guard-rooms, &c., &c.; all these causes have contributed to render nearly half our tents unfit for field service, though for the contingent purposes above stated they will still be available.

"17. Improvements connected with the sanitary welfare of both European and Native troops on board ship have been sanctioned by Government.

Troops on board ship.

"18. A compilation of recent standing orders, affecting the department in its various branches, is being printed for the use of the officers of the department, and will be added to as occasion may require.

Compilation of recent orders.

"19. The original pamphlet published by the department in 1860 for the guidance of officers arriving at Bombay with European troops has been corrected up to date in this department, and forwarded to the Adjutant General for any addition that may be requisite; when complete it will be submitted to Government for authority to publish it.

Pamphlet for the guidance of Officers and Regiments on first arrival in the country.

"20. Major Baigrie's and Captain Mallaby's surveys in Rajpootana, accompanied by routes, topographical notes, &c., are under preparation for the press, and will be submitted to Government shortly with a view to their being printed.

Rajpootana and Malwa Surveys.

"21. The maps and plans ordered by Government for despatch to the Secretary of State for India are in progress. Four sets have already been completed and laid before Government.

Maps and Plans of Stations and Barracks.

"22. Our means of lithographing large maps and plans are very defective at present in this Presidency. I hope however, through the aid of the Surveyor General in India at Calcutta, to multiply our most useful maps and plans to an extent adequate to meet the constant demand for them."

REPORT on the administration of the Army, in the Adjutant General's Department, for the official year 1865-66, *submitted by* Colonel T. STOCK.

1. The administrative character of the events of the past year, so far as relates to this department, has not on the whole been such as to demand more than a cursory notice.

Reduction of Establishment.

2. The gradual reduction of the Native Army, as ordered in 1860-61, has steadily progressed, and the annexed statement (marked **A**) will show the manner in which this has been carried out from year to year.

Reduction of Native Cavalry.

3. Thus on the 1st February 1861 the 9 Cavalry Regiments which appear in the statement as having been effective on the 1st January of that year were reorganised into 12 Regiments of an uniform establishment of 360 each. On the 1st October 1862 the number was reduced to 8 Regiments of an establishment of 499 each, the 2nd Poona Horse, 4th Sind Horse, and 2nd and 3rd Southern Maratha Horse being reduced.

4. In 1865 the remaining Regiment of the Southern Maratha Horse was disbanded, thereby reducing the number of Native Cavalry Regiments to seven.

Formation of a Body Guard for His Excellency the Governor.

5. Simultaneous with the final reduction of the Southern Maratha Horse a Body Guard for His Excellency the Governor was formed, composed of volunteers from that regiment. The strength of the Guard, as fixed by G. G. O. No. 174 of 1865, stands as follows, viz :—

1 European Officer.

1 Russuldar.	1 Farrier.
1 Ressaidar.	60 Sowars.
1 Jemedar.	1 Puckaul Bheesty.
1 Kote Duffedar.	1 Hand Bheesty.
5 Duffedars.	3 Lascars (since added).
1 Trumpeter.	

Reduction of Native Infantry.

6. The number of Native Infantry Regiments on 1st January 1861 was 34 (including 3 Belooch Battations and 2 Battalions of Jacob's Rifles). Of this number 32 had a uniform establishment of 768, and the remaining 2 (the 3rd and 5th Regiments) had 1107 and 1070 respectively. The latter corps being then in China, no reduction was made in their establishment.

7. The 29th, 30th, and 31st Regiments and 2nd Battalion Jacob's Rifles were reduced by G°. O. C. of 22nd May 1861, and since then the number of Native Infantry Regiments has remained at 30, of a total strength of 712 commissioned and non-commissioned officers and men.

8. On the return of the 3rd and 5th Regiments from China in 1862 those corps were reduced to the established strength.

9. Under Government Resolution No. 659 of the 3rd March 1863 the establishment of the 22nd and 29th Regiments was increased by 100 as a temporary measure on account of these corps being sent on service to China. Since their return in 1865 this increase has been reduced.

10. The reductions thus noted were completed without detracting from the general efficiency of the Native Army, which now stands somewhat under its established strength.

11. Further, the G Battery 18th Brigade Royal Artillery was reduced on the arrival from China of the G Battery 14th Brigade, the men composing it being transferred to the Batteries serving in the Presidency.

Reduction of G Battery 18th Brigade Royal Artillery.

12. In August 1865 the appointment of Brigade Major at Kurrachee was abolished, and the duties thereof have since been conducted by the Assistant Adjutant General Sind Division.

Brigade Majority at Kurrachee abolished.

13. The appointment of Officer Instructor of Musketry in British Cavalry Regiments has been abolished in order to provide for a Serjeant Instructor of Fencing.

Appointment of Musketry Instructor in British Cavalry Regiments abolished.

14. The increased attention which has of late years been given to the care and preservation of Rifles has been instrumental in leading to the detection of inferior weapons, and to the discovery of flaws and defects in their manufacture which had previously passed unobserved.

Arms—their preservation and repair.

15. The system of repair of interchangeable rifles of the pattern of 1853, promulgated in War Office Circular No. 697 of 15th July 1861, has been introduced into all regiments of Her Majesty's British Forces armed with trade-made weapons, and additional Regulations have been laid down to meet the special requirements of service in this country.

16. The Rules under which the Regimental Canteens and Canteen Funds were formerly managed have been superseded by a revised Code of Regulations which came into force on the 1st July 1865.

Canteens.

17. On the 18th November 1865 the restriction on the issue of porter to commissioned officers was withdrawn in favour of the subalterns of the Army.

Convalescent Depôts.

18. The issue of English blankets to all European soldiers and their wives proceeding to the Sanitaria of Mount Aboo and Poorundhur has been authorised.

Interior economy and discipline.

19. *British Troops.*—Regulations have been established in view to the speedy disposal of prisoners, and the prevention of irregularities in their safe custody and treatment.

20. *Unattached List.*—Regulations have also been established whereby the misconduct of European non-commissioned officers and soldiers employed in the various departments of the Army will be investigated and punished by competent officers.

21. Departmental efficiency will thus be brought under the influence of military discipline in the strictest sense, and the lax supervision hitherto inseparable from detached employ will, it is believed, give place to corrective measures as occasions or circumstances may demand.

22. *Sappers and Miners.*—The European portion of the corps of Sappers and Miners being now composed of soldiers who have volunteered for the general service of the Crown, the Local Indian Regulations, in so far as they are applied to the records and interior economy, have become obsolete.

23. The original organisation of the corps remains undisturbed, but the new conditions of service of the European non-commissioned officers have necessitated the introduction of new Regulations by which the position of the

men and their relations with the regiments to which they are posted have been clearly defined.

24. *Native Troops.*—A system of minor punishments has been introduced by which Commanding Officers are enabled to exercise certain definite powers for the suppression of crime and the maintenance of discipline in the Native Army. The power to award punishment for petty offences hitherto entrusted to subordinate Native officers has been partially withdrawn or suspended; and the British officers attached to these regiments have been enjoined to exercise a vigilant supervision, in view to discountenance and repress acts of caprice and hasty conduct on the part of Native officers of all grades.

Rations.

25. At stations where European troops are located European commissioned officers have been permitted at their option to obtain from the Commissariat Department full rations for themselves and for the adult members of their families, and half rations for their children, at cost price.

26. An increase of Rs. 3 per mensem to the subsistence allowance granted to the European and East Indian wives of British soldiers has been received as a great boon.

27. The period during which full rations have hitherto been issued to the widows of European non-commissioned officers and soldiers, and half rations to their children, has been extended from six to twelve months, provided the widows do not re-marry or leave India prior to the expiration of that term.

28. A similar indulgence has been granted to the widows and orphans of non-commissioned officers and men on detached Staff employ, provided the men draw less than Rs. 75 a month.

29. Further, the Regulations under which half and quarter rations were issued to the wives and children of European soldiers during the time the latter are separated from their families by reason of the exigencies of the public service have been extended to the families of men serving on the Unattached List who may be similarly separated.

30. A similar indulgence has also been granted in the case of wives and families of soldiers separated from the latter owing to either the soldier or his family being sent to a convalescent depôt.

Veterinary.

31. Attention has been drawn to the undue casting of horses which by proper care and the adoption of precautionary measures might have been greatly reduced, if not entirely prevented. Improper stable management and lax supervision, defective line gear, bad grooming, and unnecessary exposure of the horses have contributed greatly to their diminished efficiency. These important considerations have been pointed out, and a hope is entertained that the next annual report by the Principal Veterinary Surgeon will exhibit still more favourable results.

32. The good economy of the Superintending Veterinary Department continues to show itself by a notable difference in favour of Bombay over the average castings and deaths in the Bengal and Madras presidencies.

Workshops.

33. The successful efforts which have been made within the last five years in view to the establishment of Workshops in British regiments afford abundant proof that the European tradesmen of the Army evince a just appreciation of those efforts by their praiseworthy exertions in the pursuit of useful and profitable employment.

34. As a further inducement to renewed vigour on the part of individual workmen, a system of annual prizes has been instituted to promote emulation, and to encourage young and inexperienced soldiers to devote their leisure hours to instruction in such trades as they desire to learn.

35. The distribution of these prizes is divested of its military character, and is as free as possible from the restraints of discipline. Thus the occasion is considered as a *fête*, and a general holiday for the officers and men of the regiments, the Band playing at the place of distribution, and the Regimental School children in attendance to witness the ceremony.

36. Such arrangements cannot fail to create and secure a cheerful cooperation and mutual confidence throughout corps, while the associations of the event must impart to the character of these institutions a permanence and stability which under less favourable circumstances it would be difficult to expect.

37. Finally it may be observed that the united action of the officers of the Army, combined with support afforded by the residents of the various military stations, have created for the troops many fertile sources of industry, profit, and amusement. Periodical exhibitions have been organised in furtherance of this desirable object, and the results in every case give cheering hopes of the ultimate decrease of crime, the preservation of discipline, and the general prosperity and comfort of the soldiery.

STATEMENT A.

STATEMENT showing how the Reduction of the NATIVE ARMY, *authorised by G. O. C. No.* 1277 *of the* 16*th November* 1860 *and subsequent Orders, has progressed.*

16 H

CORPS.	1st January 1861.			1st April 1862.			1st April 1863.			1st April 1864.			1st April 1865.			1st April 1866.			REMARKS.
	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	No. of Regiments.	Establishment of each Regiment.	No. of Supernumeraries.	
Cavalry ..	3 1 3 2	500 756 800 713	None.	8 4	360 450	None.	8	499	25	8	499	None.	8	499	None.	7	499	7	
	9	6,082	....	12	4,680	....	8	3,992	25	8	3,992	....	8	3,992	....	7	3,493	7	
Infantry ..	32 1 1	768 1,107 1,070	2,080	29 1	712 987	1,043	29 1	712 949	206	28 2	712 812	579	30	712	None.	30	712	None.	
	34	26,753	2,080	30	21,635	1,043	30	21,597	206	30	21,560	579	30	21,360	....	30	21,360	....	
Total....	43	32,835	2,080	42	26,315	1,043	38	25,589	231	38	25,552	579	38	25,352	....	37	24,853	7	

Appendix A.

MINUTE *by* HIS EXCELLENCY the GOVERNOR *on letter No.* 202, *Military Department, Government of India, dated* 15*th July, and previous correspondence regarding Military reductions.*

I find it difficult without some limitation and qualification to give any opinion as to possible reductions in any one branch of the Military expenditure of this Presidency, and I would solicit reference to what was said on this subject in our letter to the Government of India, No. 1108 of the 21st April 1864, of which I would beg the Secretary to append a copy in sending on our reply to the Government of India. In that letter and on other occasions it has been pointed out to the Government of India that to provide efficiently for the defence of this Presidency at the present day involves conditions essentially different from those which were involved ten or even five years ago. We had then little to think of besides India and Indian enemies; and we were quite certain that if anything like invasion either by land or sea were threatened, we should have ample notice, and a more than even chance of being able to meet and to destroy any invading force while it was yet at a great distance from our sea-board or threatened frontier.

2. Things are very much changed now. There are three powers—France, Russia, and America—any two of which could, by combination, seriously threaten an invasion of our sea-board. I do not say in large force, but in force sufficient to cause a very serious shock and great alarm throughout every considerable military station in India within forty-eight hours after the landing had been reported to the seat of Government.

3. This may appear an exaggerated statement, but let us well reflect how much has been done of late years to lessen the difficulty of assembling 5,000 or 6,000 men, Europeans, or soldiers as good as the European soldiers of continental armies at Suez, or at one of the ports between Singapore and San Francisco, and of transporting them to the Indian coast.

4. This is not merely owing to the immense increase of large sea-going steamers in these seas, but to the altered relations of the great Powers with China, Japan, Siam, and Cochin China.

5. In the case of the French, at all events, it would not be necessary to attempt the somewhat difficult task of eluding the vigilance of our British cruisers. A very considerable force might be sent to a French or neutral port, such as Mahe, Goa, or Diu, or it might even be assembled, on a dozen plausible pretexts, in our own ports—Aden, Bombay, Galle, or Singapore—before war was declared, or any step taken which would justify active defensive hostilities on our part; and I would ask for a calm and careful consideration of the probable effects throughout India of the telegraph some day announcing, at each of our great military stations, that war having been declared, a hostile European force had established itself on any part of the four thousand miles of sea-coast which our Indian mainland offers, and that it was necessary to assemble a force of 4,000 or 5,000 British troops, with a siege train, to expel them.

6. Our difficulties would be much lessened if such a force attempted a march inland. But if it remained quietly entrenching itself, with two months' food and ammunition in any strong position near the coast, a great amount of indirect mischief might be done before the invaders were expelled or starved into surrender.

7. Very similar would be the effect of an intimation that any part of our N. W. frontier was seriously threatened.

Whethe rlate events in Centrdl Asia or Affghanistan have increased the risk of such threats the Government of India knows better than we do.

8. I only allude to these things here lest it should be supposed that in estimating the military force which I believe to be requisite for this Presidency I am providing against such contingencies. I fear such dangers are not so remote or impossible as we would fain persuade ourselves they are. But the question of how to meet them is not a matter of a few batteries or battalions more or less here or there.

9. I think we should never forget that if we would place India in a condition of even tolerable security in the event of a European war we must entirely recast our whole system of military defence. We must have on our sea-board and on our N. W. land frontier a reasonable amount of fortified positions—fortified not only to resist the attacks of a half-hearted and half-armed Indian mob, but fortified so as to render it impossible for an active and enterprising enemy to carry the works by a coup-de-main, or to leave them in his rear.

10. We must deal with our Native troops so as to enable us with their aid to fill the gaps which large or prolonged operations or difficulties in recruiting would leave in our European line. I need not say that our Native Army is hardly in a state to do this now.

11. But above all we must improve our communications so as to enable our Punjaub and N. W. force to appear at Calcutta, Madras, Bombay, or Kurrachee, or to be reinforced from those quarters in a shorter time than the months which would now be needed for any operations intended to concentrate our Indian forces.

12. This cannot be done by our system of railways now in course of execution. We must not only have a line from Calcutta to Mooltan, from Allahabad to Bombay, and

from Bombay to Madras, but we must have a line from Kurrachee to Mooltan, and lines which, if not coast lines, shall give better access than we now possess to various intermediate points along the coast, and we must not remain dependent for our communications between north and south on a single line which any determined and well directed body of fifty men could interrupt for a fortnight.

13. I only allude to this question of communications here because there is in many quarters a disposition to rest content with the scheme sketched out before railways existed, and to deal with it as a commercial question, whereas I am convinced it is a Military and Political question, far surpassing in importance any which relates to merely numercial military strength. With good officers and plenty of money and material, and time to act, we might do much to create a respectable Army in a few months; but years must elapse before our railway communication between the north and south and between the interior and the coast and along the coast-line can be so improved as to secure the necessary rapidity of concentration without which our position during a European or American war will be one of continued and imminent peril, and we cannot therefore, I believe, too soon or too vigorously begin the work of railway extension.

14. Till that work is well advanced the smallest force compatible with security against invasion would, I think, considerably exceed what we now have.

15. But it is not of such a war establishment that I wish now to speak, and looking for the present simply at the numerical military strength necessary for the protection of this Presidency from internal disturbance without reference to European politics, I can add little to what we said to the Government of India in April 1864. We can only submit that even the experience of one year has added strength to the opinions we then expressed.

16. For all present purposes of Indian warfare the composition of our Army is not well proportioned.

17. The European element is certainly larger than is necessary. It is far in excess of what was needed to conquer the country when many native powers had leaders of their own in command of large armies, with powerful artillery. The people of this part of India and its neighbourhood are now fairly content with our rule; they have few leaders of any promise; the common people are prosperous enough to have but few revolutionary tendencies; no known extensive grievances are un-redressed, and there are but few guns left at the command of any native chief.

18. Without being over-confident it may be safely said that putting out of consideration all chance of interference by any European power, it is not easy to see in this part of India any risk of internal disturbance in which a single European regiment, with a battery of guns and Native troops in proportion, would not be able to do all the fighting that could possibly be required in the open field, unless misgovernment, or political or religious excitement, or our inability to promptly punish open resistance to Government, or some real grievance, should cause a general rising of the population. Whenever that occurs it will of course require a very large force to restore order.

19. But while the European element in our Army is far in excess of our probable internal wants, the Native Infantry is certainly rather below than above the complement necessary for efficiency.

20. It is deficient in numbers because for every European regiment we require to have at hand a certain proportion of Natives for duties which are not suited to Europeans, or which involve more risk of loss of health or efficiency to Europeans than to Natives.

21. Thus every officer who has commanded a station in the plains knows that it would be next to impossible to carry on the ordinary cantonment duties in the hot weather and rains with a purely European force, or without almost as many Natives as Europeans; not that there is any duty which the Europeans cannot do, but that much of it is of a character which Natives can do well with little risk to life and health, while the duty would involve considerable risk to both if performed by Europeans.

22. Our returns show that at no station is our present Native Infantry much in excess of what is thus required of them as constant companions of our European force. We could no doubt collect a considerable force, Europeans and Natives together, from more than one station; but it is only the accident of our receiving back two regiments from China which has enabled us, without serious inconvenience and much risk of overwork, to withdraw the Native Infantry necessary for hunting Wagheers in Kattywar, and guarding the convicts while they are building the central jail in the Deccan.

23. Of the deficiencies of our Native forces in armament and equipment I need not now speak. Our Native Infantry must, I believe, be better armed before they could be safely led against any but Indian troops. In India their present arms will suffice as long as their opponents have no better.

24. How long any possible Indian enemy is likely to be armed as badly as our own sepoys now are it is not necessary here to discuss; but this subject of improving the arms of our Native troops must ere long force itself upon our attention.

25. For the reasons above given, therefore, I continue strongly of opinion that we cannot do with less than our present number of Native Infantry as long as our force of Europeans remains at or near its present strength and distributed as at present.

26. Much of the efficiency of our European troops and economy of their lives as well as of their money cost depends on their quarters, which in this Presidency are, as we have often represented, much inferior in extent and character to what we have in other parts of India, and also to what the regulations of the Government of India require for housing our present force. We have not as yet either the plans or the money to supply this deficiency. For plans we must wait till the standard plans prepared under the instructions of the Government of India are ready. Of money large sums have been set aside by the Government of India for military buildings in this Presidency, but they can hardly be said to be available for rapid expenditure in improving the habitations of our soldiers owing to the complicated restrictions imposed by the present rules of the Public Works Department.

27. But if we had both plans and money available, and if we were to apply the money with our utmost energy, it would still take several years before we could provide all our present European force with sufficient barrack accommodation, and several years more before we could say that we were ready to receive and suitably accommodate such a European garrison as we should wish to have in the event of a European war.

28. For, be it observed, if the Government of India were to tell us tomorrow that they wished to increase the European force on this coast by but a single regiment, we could not possibly accommodate the men in barracks. They must either be under canvas, or crowded beyond what is compatible with health. With any prospect of active service this does not signify, but it is otherwise in time of inaction.

29. Briefly then our situation is this—

Our military communications are imperfect for want of money.

There is little room for economy in the Native Army.

The European Army, though smaller than we should require in case of European war, is much larger than we need for present internal Indian duties.

It is also larger than we can properly house either at present or for some time to come.

30. I would propose to reduce our present European force, leaving it still amply large enough for all Indian purposes, and to apply the saving thereby effected to provide better barrack accommodation and better means of military communication.

31. The immediate reductions I would propose are as follows:—

I. In addition to the Battery ordered to be disbanded in consequence of the arrival of G 14 from China, I would convert two of our present Light Field Batteries into Garrison Batteries; this would effect a saving of Rs. 2,21,654 per annum.

II. I would entirely reduce two Batteries of Horse Artillery, a further saving of Rs. 4,45,726.

III. And I would send home without relief one Regiment of European Infantry costing Rs. 8,18,829 per annum; and

IV. One Regiment of Dragoons costing Rs. 7,15,607, making a total saving of Rs. 22,01,816 per annum.

32. This sum steadily applied would in a few years effect a vast improvement in our present barrack accommodation, or it would pay the guarantee upon $4\frac{1}{10}$ millions sterling of Railway capital, and at the present rates of Railway expenditure and Railway returns* would give us 275 more miles of guaranteed Railway open for traffic, and thus greatly increase the effective power of our present force.

* *Vide* Mr. J. Danvers' last report on our Indian Railways.

33. The annexed tabular statement shows how and where I would propose to reduce the Artillery. I would withdraw a Dragoon Regiment from Mhow or Ahmednuggur as most convenient, and withdraw one of the three European Infantry Regiments which have now their head-quarters at Poona.

H. B. E. FRERE.

20th September 1865.

ROYAL ARTILLERY.

STATEMENT *of Batteries present and proposed for Bombay Presidency.*

H. A.—Horse Artillery. | H. B.—Heavy Battery.
F. B.—Field Battery. | G. ——Garrison do.

Division.	Station.	Present.	Proposed.	Nature of change.
Sind	Kurrachee	1 F. B...	1 G. B.	1 F. changed to G.
	Hyderabad	1 F. B...	1 F. B.	No change.
Northern Divison	Ahmedabad ..	1 F. B...	½ F. B.	½ F. B. reduced.
	Deesa	1 F. B...	1 F. B.	No change.
	Baroda.....	1 F. B...	½ F. B.	½ F. B. reduced.
Mhow	Mhow	1 H. A. 1 H. B.	1 H. A. .... 1 H. B.	No change.
	Nusseerabad	1 H. A.	1 F. B.	1 H. A. to F. B.
	Neemuch....	1 F. B...	1 F. B.	No change.
Poona & Bombay.	Kirkee	1 H. A. 2 F. B... 2 G. B...	2 F. B. Kirkee.. 4 G. B. Kirkee and Bombay..	1 H. A. reduced. 2 F. B. changed to G. B.
	Ahmednuggur..	1 H. A.	1 H. A	No change.
	Sholapoor	1 F. B...	None	1 F. B. reduced.
Belgaum	Belgaum	1 F. B... 1 G. B...	1 F. B.	1 G. B. reduced.
Aden.....	Aden	2 G. B...	2 G. B.	No change.
	Total—H. A. .... 4 ..		2	2 less.
	F. B. .... 10 ..		8	2 do.
	H. B. .... 1 ..		1	No change.
	G. B. .... 5 ..		7	2 more.
				25

Appendix B.

MINUTE *by the* Honourable B. H. ELLIS,
dated 23rd October 1865.

I have detained these papers until I could peruse the former proceedings relating to Military reductions in late years. After considering this correspondence, and reviewing the question both in its general bearing and in detail, I can but come to the same conclusion as His Excellency the President, namely, that we have more European troops than are required in this Presidency.

2. The question has been discussed in its double aspect of the requirements for the maintenance of internal peace in India, and for the contingency of aggression from foreign powers.

3. I think that it should be broadly stated as the basis of our calculations that we are to maintain in India only a sufficient force to keep the peace as against all enemies likely to arise in India, and that we are to do this without looking to England for additional troops on every occasion of internal commotion. At the time of the mutinies we were below the mark tested by this standard, and as a consequence we had first the mutinies and then an urgent application to England for assistance.

4. If we are to undertake no more than this, it seems that our force is greatly in excess of what is needed. That we should not attempt to provide the larger force required in a contest with European powers is in my judgment abundantly clear.

5. If a European war broke out every British soldier in India beyond the number absolutely needed to maintain the peace of the country would be at once withdrawn, and

as a European war would assuredly be the occasion taken by those who are ill-disposed to British rule to disturb the internal peace of India, we should be deprived of our strength at the very time when it is most needed, and we shall have committed a great financial blunder in having admitted as a charge on the India revenues the cost of maintaining troops which will be withdrawn when they are most urgently required.

6. If again the scene of a European war were shifted to the East, it would be necessary to supplement our forces here by bringing to bear all the resources available nearer home, and this would have to be done whatever the force ordinarily maintained in India. It would then become an Imperial question of vital importance, and would have to be dealt with in reference to the whole Empire and not to India alone.

7. It should be our duty therefore to urge that while this Government is ready to keep up whatever troops may be deemed essential for the maintenance of peace in India, the Indian revenues cannot pay for an army for the contingency of a war with European or American power.

8. In applying this principle in detail it will not take long to arrive at the conclusion that the chief redundancy is in Cavalry and Artillery. We have in this Presidency two regiments of European Cavalry, when one is ample for all our local requirements, and application should forthwith be made to relieve us of the second regiment. This may be effected either by a return of one regiment to England without relief, or by a transfer of one regiment to the Bengal Presidency, leaving the further steps to be taken in that Presidency.

9. In regard to Artillery, after a careful scrutiny of the proposals of His Excellency the President, I can see no grounds for dissenting from any one of the suggested

changes. The result will be the entire reduction of one troop of Horse Artillery and of one Field Battery, the conversion of another troop of Horse Artillery into a Field Battery, and of two other Field Batteries into Garrison Batteries. I trust that these alterations may at once be proceeded with, but that arrangements will be made with the authorities in England to effect the reductions with as little loss and inconvenience as possible to all concerned, and that these arrangements will be matured before orders are issued for the final reduction.

10. I see no difficulty in the proposed reduction of one Infantry Regiment, but the other reductions seem to be more urgently required. As so many Bombay regiments are just being relieved, the only way of carrying out this reduction is by applying for one of the new regiments to be transferred to the Bengal or Madras establishment in place of some regiment to be relieved from those presidencies next year.

11. The question of reduction of the Native troops involves totally different considerations. This part of the subject appears to have been but recently discussed in full by this Government, and the decision was against further reduction.

12. I concur in that conclusion on the supposition that the present system is unalterable, but I have a very strong impression that the garrison duties of Native troops, and especially the internal regimental duties, might be greatly economised. It is not for me to propose such reforms, but the subject is worthy of the attention of the highest military authorities, and I am confident that if reform were insisted on it could be effected without injury to the public service, while the overworked regiments, if not the finances of the State, will be relieved.

13. If reduction could thereby be effected, the reduction would be not in the number of regiments, but in the number of men composing a regiment; and even this reduction should be made with caution as a very weak regiment would be unable to detach a wing, and it might become difficult to etain posts at which it is of importance to have a military body.

14. Closely connected with this branch of the subject is the relation of Police to Native Infantry, and we must take care lest in reducing at the same time our Native Infantry and our Police we endanger the peace of this country, and cripple ourselves in the event of the occurrence of local disturbances however slight.

15. I hold that disciplined Police are fully as competent as the Military to guard Treasuries and Jails, but that so long as there are troops who must be maintained for the contingency of war, it is economical and useful to employ these troops in times of peace for the custody of prisoners and treasure.

16. This use of troops ceases to be economical when they are maintained solely for this object. The Police cost less in actual pay and in prospective pension, and when Police are employed about two-thirds of the strength required by military troops suffice for the duty. I do not advocate the creation of a body of Military Police to take the place of military sepoys under another name, but the duties of an ordinary sentry can be performed by the Civil Police or Constabulary as efficiently and more economically, except under the conditions above explained.

17. If therefore the internal duties of a Native Infantry regiment could be reduced, it might be possible to reduce the strength of Native Infantry regiments, with a comparatively small increase to the Police, but so long as the Native

Infantry regiments can continue without inconvenience to take their present jail and treasury duties, I would not advocate their being relieved of the work.

18. In any case I would strongly deprecate reductions on the principle of those recently made. A financier at his desk counting the cost of a regiment in rupees does not reckon up the vast amount of discontent spread throughout the country by the dismissal of a band of men who are suddenly deprived of their bread. I am sure that nothing has tended so much to injuire the popularity of the Native Army as the loss of that feeling of security which was formerly the great attraction to a sepoy to enlist. The recruit used to feel that so long as he behaved well he was sure of a competence for life, and that when old his pension would be secured to him. But reduction after reduction has sent abroad numbers who would willingly have remained, and a general feeling of uneasiness prevades those who are still in the service. I do not think this can be too strongly pressed on the attention of the Government of India. The present financial saving effected by the discharge of a body of men is as nothing compared with the evils following the reduction. It would be far wiser to assure all sepoys that whatever reductions may be made, no one will be discharged so long as he is efficient and behaves well, and it would not involve any great loss financially if all such men when not entitled to pension were retained in the service as supernumeraries and absorbed as vacancies occur.

19. To reduce any further by whole regiments would, in my opinion, be an error, even if reduction were otherwise advisable. There have been so many reductions during the last few years that further reductions would greatly increase the general feeling of uneasiness and insecurity to which I have already referred. Reduction of the Native Army is in

my opinion proper only in the way of reducing the strength of regiments, and this mode of reduction is possible only if the present system can be so far modified as to lighten the duties to be performed.

20. In conclusion I would record my cordial concurrence with His Excellency the President's remarks as to the necessity, from a military and political point of view, for improving our great lines of communication. If at the same time the arms of our Native troops are improved, the efficiency of the whole army, with much reduced numbers, will in a few years be nowise diminished, with the further general benefit that the prosperity of the country will be greatly advanced by the construction of new lines of road and railway.

B. H. ELLIS.

Appendix C.

STUD REPORT.

No. 2181.

MILITARY DEPARTMENT:

Bombay Castle, 28th July 1866.

Letter from the Principal Veterinary Surgeon, No. 161, dated 31st May'1866.

SIR,—I have the honour respectfully to submit the annexed Stud Return showing the services of the Government Stud Horses in this Presidency during the year 1864-65, with the following report, for the information of His Excellency the Governor in Council.

2. As it will take some time to collect the Stud statistics for the year just elapsed, 1865-66, from the different collectorates, I have thought it better to include in the

present report the general operations in the Stud Department up to the present date.

3. I append a return showing the present number and distribution of the Government Stud Horses in this Presidency, and the number still required, for information and reference.

4. On comparing the present return with the return for the previous year, 1863-64, it will be noticed that, omitting Kattywar, there is a falling off in the number of mares amounting to 64, and on a closer comparison it is seen that with the exception of Khandeish there is a general falling off in all the collectorates; but in nearly every case the fault is found to be on the side of the horse and not of the country breeders. For example, at Seroor, where two horses are stationed, there is a falling off of 53 in consequence of one horse being old and becoming unfit. Again, horses have been found to be unsuited for the district, and few mares have been given to them. Example "Andy" at Sattara. At Ahmednuggur there is a falling off of 22 from the stallion not being in good health and few mares becoming in foal, so that the natives were not induced to resort to him; and so on where the falling off is considerable the cause is found to be on the side of the horses.

5. In Khandeish there is a marked improvement, the numbers being 107 for 1864-65 against 23 for 1863-64. It is also in this collectorate that the prize show held last year was so encouraging.

6. There is a slight improvement in the number of foals returned, but the information is of little value as affording any criterion of the number actually produced, and without Inspectors it is impossible to obtain accurate information on this point, so that it is to the prize shows we must look as affording an index to the number and quality of the young stock.

7. During the past year I inspected the horses stationed at Alligaum, Seroor, Ahmednuggur, Ahmedabad, and Poona.

8. At Alligaum 4 horses have been stationed since a comparatively recent date (1864-65), and I have much pleasure in reporting very favourably of the Stud operations in this quarter. For the year 1865-66 no less than 295 mares have been served by the Alligaum horses, and a large number are said to be in foal. Lieut. Colonel Neale, in whose charge the horses are, reports—

1 English, "Andy."
3 Arabs.

I. "Owing to the number of mares that are daily brought to be covered by the Government stallions, I am unable to meet the wishes of all the owners, and consequently obliged to reject many.

II. "I much regret being obliged to disappoint owners of mares who sometimes travel a distance of from 50 to 100 miles to have their mares served by Government stallions; but I cannot help it; the stallions in my charge have as much work as is good for their health.

III. "Mares are being daily brought to me with foals at foot, the produce of the stallions in my charge, to be again served, and I have much pleasure in stating that the produce are most promising—not the puny sickly animals generally seen at twelve days' old, but fine sturdy animals; their dams are generally speaking in good order, and show signs of being well cared for.

IV. "As so many mares are now being brought, and natives are very particular in having their mares put to the horse when the foal is thirteen days' old, I think it would be as well if you could manage to send me a couple of (additional) stallions, say for a couple of months."

9. During my visit to Alligaum I had an opportunity of inspecting from 30 to 40 mares with their produce collected at a few hours' notice in the neighbourhood, and I was agreeably surprised to see so many good mares and the young stock looking so promising. Several of the owners evidently take pride in their stock, for they were in good condition, and appear to be well cared for. If the breeders generally would pay more attention to this point the improvement in the horses would be still more rapid than it is. In this respect the prize shows will do much good.

10. The English horse is in good order, also the 3 Arabs; but from the number of good sized mares about here, it would be advisable to replace one of them by a larger horse. This will be done when opportunity offers.

11. There is a great demand for horses bred in this district; purchasers frequently come long distances, and the young stock find ready sale.

12. Considering that these horses have been stationed here a short time only, their great popularity amongst the natives is very satisfactory. Much of this success is due to Lieut. Colonel Neale's influence in the district, and his constant exertions, by encouraging and advising the breeders, and taking care that they have ready access to the horses, to give effect to the views of Government on the subject.

13. At Seroor 2 horses are stationed in charge of Colonel Westropp, of the Poona Horse. The Arab stallion "Hercules," stationed here for many years, was sold on account of age and unfitness; this horse has done good service in the stud; he is the sire of a large number of horses in this district, and some of the best colts are his. The English horse is in excellent condition, also the Arab; and both horses have full work. In fact Colonel Westropp reports "there is ample

"1 English "Bay Malton."
1 Galloway.

work at Seroor for 4 horse as numbers of mares come in from the district that I am unable to get covered." As soon as opportunity offers another horse will be sent to Seroor to replace the one sold, for which Government sanction has already been obtained.

14. The prize show held here this year was well attended, and altogether the accounts are most encouraging. Colonel Westropp takes great interest in the subject, and much of this success is due to his efforts.

15. During the last cold season 4 horses in the Poona collectorate were placed under the charge of Major Shortt, Superintendent of Police, who took them into the districts with him during his official tour, and with the best results, as shown by 120 mares being brought to them against 45 last year, 1864-65. The horses are in good condition, and the natives have every facility of access to them. From the nature of Major Shortt's appointment, and the facilities which he possesses of making the horses known, his zealous cöoperation has been of the greatest value. It appears from information which he collected that in the Poona collectorate alone there are upwards of 700 mares used principally for breeding purposes. The English horse "Birmingham" was transferred to this collectorate from Khandeish as he was considered to be unsuited for the latter country.

1 English "Birmingham."
3 Arabs.

16. At Ahmednuggur one Arab horse is stationed, recently transferred from the Ahmedabad collectorate. The stallion stationed here previously was sold on account of age and chronic debility.

17. At Ahmedabad two horses are stationed; they are in excellent condition, and are well taken care of. During the year a third horse stationed here was transferred to the Ahmednuggur collectorate, to be replaced

1 English "Black Bird."
1 Arab.

by a smaller horse. The accounts from this district are not so encouraging as in those previously mentioned. There appears to be a prejudice against the horses by the natives. There is a falling off of 5 mares in comparison with the previous year; this will no doubt be remedied in time, aided by the regularly established annual prize show. This is a good breeding district, and from the interest taken in the matter by Mr. Oliphant, the Collector, and his Assistants, success must eventually attend their efforts.

18. I had not during the past year an opportunity of inspecting the Government horses stationed in Kaira, Khandeish, Kulladghee, and Sattara collectorates, but they are reported to be in good order, and have a fair amount of work, particularly in the two former collectorates.

10 Arabs.

19. During the past year 4 horses have been sold under authority, as follows:

Government Resolution No. 2799 of 11th September 1865.
Do. do. No. 185 of 17th January 1866.
Do. do. No. 431 of 7th February 1866.

No.	Name and Breed.	Where serving.	Cause of being sold.	Price realised at Auction.
	Australian.			Rs. a. p.
1	....	Kulladghee....	Land wind, debility.	125 0 0
	English.			
2	Crackshot ..	Ahmednuggur ..	Impotent	156 0 0
	Arabs.			
3	Hercules	Seroor	Old, worn out	162 0 0
4	No. 8	Ahmednuggur ..	Old, chronic debility	26 0 0
			Total.....	469 0 0
			Deduct commission and advertising charges.....	68 8 0
			Amount paid into Poona Treasury.....	400 8 0

20. The English horse "Crackshot" was found after a fair trial perfectly useless for the Stud as he could not be induced to notice a mare. From unsoundness he was also unfit for the service.

Government Resolution No. 339 of 30th January 1865.
Government Resolution No. 3109 of 6th October 1865.

21. In accordance with sanction granted by Government, 4 galloway stallions have been purchased as follows :—

No.	Name and Breed.	Where stationed.	Price paid.			Remarks.
	Arab.		Rs.	a.	p.	
1	Gunner	Alligaum	1,100	0	0	
2	Old Tom	Sattara.....	800	0	0	Average price Rs. 825.
3	Deerfoot	Seroor	500	0	0	
4	Honeysuckle .	Khandeish	900	0	0	
		Total..	3,300	0	0	

22. The number of horses yet required, and for which Government sanction has been obtained, is Arab horses 3 ; galloways 25—total 28. From the non-importation of Arabs during the past two years there is a difficulty in procuring suitable horses ; those now in the country are for the most part aged. As soon as procurable they will be purchased and sent to the districts urgently requiring them.

Government Resolution No. 3109 of 6th October 1865.

23. The regularly established Prize Shows are making satisfactory progress. The show held at Mhyjee in Khandeish in January 1865, particulars of which have already been submitted to Government, was very encouraging.

Government Resolution No. 1854, 3rd May 1865, Revenue Department.

24. The Prize Show held at Seroor in February last was also encouraging. The Collector of Ahmednuggur reports "there were about 40 mares and foals exhibited, and the stock was better than that exhibited at any former show." At the show held in the previous year Rs. 160 only were distributed in prizes, on the present occasion Rs. 270 were distributed—a fair indication that the different classes were much better represented.

25. From my present information I am not aware that Prize Shows are regularly held at any other places (Kattywar excepted), although it is highly essential, from the success attending those already established, that they should be promoted and encouraged in every suitable district. The measure appears to depend very much on the interest taken in the subject by the local officers for the time being. It would be as well perhaps if, in an operation of this kind, it were not left so much to chance. It is the certainty of the prize show being held at a fixed place without fail that encourages breeders in looking forward to the prospect of a prize. To hold shows at uncertain intervals of two, three, or more years is all but useless. At nearly all stations gentlemen are found who are fond of horses, and who would willingly render assistance in awarding the prizes. This, and a free circulation previously in the district of the prize show notices, is all that is necessary to the success of the measure, provided the show is held with *unfailing regularity*.

26. With regard to a further supply of English horses, I think from 4 to 6 might with great advantage be imported during the next year 1867. Unfortunately the opinions entertained of the kind of horses best suited for the country are as varied as the breeds themselves. Gentlemen of long Indian experience and fond of the subject hold exactly opposite views, clearly showing that opinions are formed on incomplete evidence, and it is probable that it will be only by

a careful collection of facts, extending over a considerable period, that the merits of the English horses will be properly placed. At all events it will not throw any light on the subject by keeping him out of the country, and it is desirable that large-sized horses should be located where large mares are plentiful.

27. At present the country-bred horses have little chance of gaining a reputation as such, for I have it on good authority that many good colts find their way to the Bombay stables and are sold as imported horses. Again, the better he is, and the nearer approach he is to an Arab in appearance, so surely does the country-bred pass current as an Arab. As a rule it is very rare to find a three-year-old in the hands of the breeders. It will be noticed that at the prize shows the three and four-year-old classes are seldom represented. Indeed they are commonly sold as yearlings, and when the colt grows up, after passing through several hands in the meantime, unless unmistakeably a country-bred in appearance, he sells better as an Arab or Persian. It is this that makes it so difficult to trace the pedigrees so as to compare the respective merits of the different sires.

28. With regard to Kattywar, Lieut. Colonel Anderson in his usual annual report will no doubt submit to Government the general operations in the Stud Department of that province.

29. In consequence of the usual prize show annually held at Rajcote early in the year having been unavoidably postponed until November next, I have not as yet had an opportunity of inspecting the horses or any of their produce, so that I am unable at present to submit any remarks or suggestions regarding Kattywar breeding.

30. One of the Katty stallions is reported to be worn out and unserviceable from age, 16 years. The others are generally in good order, and it is satisfactory to find that the two English horses are rapidly coming into great request by the breeders.

I have the honour to be, &c.

J. Collins,

Prin. Vety. Surgeon & Remount Agent.

STUD.

Distribution of Government Stallions this day.

No.	Name and Breed.	Where serving.	Number required.		Remarks.
			Horses.	Galloways.	
	English.				
1	Bay Malton	Seroor	..	..	In good order.
2	Black Bird.....	Ahmedabad	..	..	,,
3	Andy	Alligaum	..	..	,,
4	Birmingham	Poona	..	..	,,
5	Sir Robert	Kattywar	..	..	,,
6	Merry Dancer	,, ...	..	..	,,
	Arab.				
7	Roostum.....	Poona	..	6	,,
8	Syrian	,, ...	..	..	,,
9	Grandmaster	Pimplegaum.....	..	..	,,
10	Soopa	Soopa	..	..	Getting old.
11	Deerfoot	Seroor	1	..	In good order.
12	Gamecock	Alligaum	..	..	,,
13	Russaldar	,, ...	..	..	,,
14	Gunner	,, ...	..	..	,,
15	Amadie	Ahmednuggur	1	..	,,
16	Sattara	Ahmedabad	..	1	,,

No.	Name and Breed.	Where serving.	Number required.		Remarks.
			Horses.	Galloways.	
17	Ashkboos	Kaira	..	..	In good order.
18	Elliot	Khandeish	..	4	,,
19	Paymaster	,, ...	..	..	,,
20	Honeysuckle	,, ...	..	..	,,
21	———	Khanapoor .. (Sattara.)	..	..	,,
22	———	Malseerus .. (Sattara.)	..	11	,,
23	———	Dhywaddi .. (Sattara.)	..	..	,,
24	Old Tom.....	Sattara .... (Sattara.)	..	..	,,
25	———	Sangola.....	..	..	,,
26	Orion	Kulladghee	..	3	,,
27	Dispatch	,, ...	..	..	,,
28	Wallace	(Kattywar.)	..	..	,,
29	Champion	(Kattywar.)	..	..	,,
30	Tam O'Shanter	(Kattywar.)	..	..	,,
31	Shiraz.....	(Kattywar.)	..	..	,,
32	Abdool Wahab	(Kattywar.)	..	..	,,
33	Luckyo (Katty.)	(Kattywar.)	..	..	Old and unserviceable.
34	Keisureeo (Katty.)	(Kattywar.)	..	..	In good order.
		Total....	2	25	

1st *May* 1866.

J. Collins,
Principal Veterinary Surgeon.

STUD DEPARTMENT.

Stud Return for the year ending 30th April 1865.

No.	Breed.	Name.	Where stationed.	No. of Mares.	No. of Foals returned	Remarks regarding the Stallions.
		Southern	*Division.*			
1	Arab ..	Roostum	Poona	9	5	In good order.
2	Syrian ..	Syrian	„	9	..	„
3	Arab ..	Grandmaster. .	„	17	1	„
4	„ ..	Soopa	„	9	..	„
5	„ ..	No. 73.....	Langola	20	2	„
6	„ ..	Hercules	Seroor	27	2	Since sold for age.
7	English..	Bay Malton ..	„	32	5	In good order.
8	Arab....	No. 8.....	Ahmednuggur.	16	2	Since sold.
9	„ ..	Gamecock ..	Alligaum	35	..	Transferred from Nassick.
10	„ ..	Rusaldar....	„	32	2	Transferred from Kopergaum.
11	English.	Andy	„	4	..	In good order.
12	Arab....	....	Sattara.....	13	..	„
13	„ ..	....	Khanapore ..	18	1	„
14	„ ..	....	Maun	18	1	„
15	„ ..	....	Malseerus ..	39	4	„
16	„ ..	Orion	Kulladghee ..	11	..	„
17	„ ..	Dispatch	„			„

No.	Breed.	Name.	Where stationed.	No. of Mares.	No. of Foals returned	Remarks regarding the Stallions.
		Northern	*Division.*			
18	English..	Black Bird ..	Dholka.....	10	1	In good order.
19	Arab ..	Sattara	Putel	22	1	„
20	„ ..	Amadie	Rampoor....	23	1	Since transferred to Ahmednuggur.
21	„ ..	Ashkboos....	Kaira	45	14	In good order.
22	„ ..	Paymaster ..	Khandeish ..	27	5	„
23	„ ..	Elliot	„	51	1	„
24	English. .	Birmingham..	„	29	..	Since transferred to Poona.
		Katty	*war.*			
25	Katty ..	Jubbadia....	Kattywar ..	..	1	Disposed of in 1863.
26	„ ..	Mankyo	„ ..	..	1	„
27	„ ..	Lukyo.....	„ ..	51	9	In good order.
28	„ ..	Keisureeo....	„ ..	18	10	„
29	Arab....	Bay Middleton	„ ..	..	9	Died in 1864.
30	„ ..	Wallace	„ ..	17	1	In good order.
31	„ ..	Champion ..	„ ..	28	0	„
32	„ ..	TamO'Shanter	„ ..	14	1	„
33	„ ..	Shiraz	„ ..	28	11	„
34	„ ..	Abdool Wahab	„ ..	20	..	„
35	English. .	Sir Robert ..	„ ..	11	..	„
36	„ ..	Merry Dancer.	„ ..	3	..	„
			Total....	706	109	

Poona, 31*st May* 1866.

J. COLLINS,
Principal Veterinary Surgeon.

RESOLUTION.—Copies of this Report should be sent to the Revenue Commissioners for information and communication to the Collectors, and to the Adjutant General of the Army. His Excellency in Council requests that the proposal in paragraph 25 of the Report, with reference to Prize Shows being more generally introduced throughout the Districts, may receive the attention of the Revenue Commissioners.

With reference to paragraph 26 orders will be hereafter communicated.

PENSIONERS' COLONY AT CHALLISGAUM IN THE KHANDEISH COLLECTORATE.

This Colony is superintended by Captain T. S. Britten, who also holds the appointment of Railway Magistrate.

2. The Colony consists chiefly of pensioners from the Artillery and Infantry. They are 627 in number, being eleven less than last year, and they possess 447 head of horned cattle, 98 head of sheep and goats, 45 carts and 133 ploughs.

3. The returns of last year showed an area of 2,728 acres of land occupied by the pensioners, but of this no less than 1,695 acres were waste. Captain Britten has made it a point to discourage this system of taking up land and allowing it to remain waste; and in this year out of 2,860 acres held by pensioners, 2,022 acres are cultivated and only 838 acres waste.

4. There is a First Hospital Assistant to attend to the medical wants of the colonists.

5. There is also a Schoolroom in Tambola for the colonists' children. It can accommodate only 35 children, but the Educational Department are about to construct a schoolhouse at this place which will afford ample accommodation for as many children as the Colony will supply.

6. The colonists are reported to be on good terms with the people of the country, and the Superintendent frequently receives applications from villagers to induce pensioners to settle in their villages.

7. The advantages hitherto exclusively offered to military pensioners have been extended to those retired from the Police force.

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

MEKRAN COAST AND SUBMARINE SECTION.

During the year under report the Submarine cable between Kurrachee and Fâo worked most satisfactorily.

2. The only accident to the cable which caused any serious delay to the traffic occurred on the 5th July, eleven miles west of Guadur. Communication was restored on the 19th idem.

3. The cable was chafed on rocks near Astola Island between Kurrachee and Guadur, and caused an interruption on the 11th July which was repaired on the 4th August. The traffic was, however, carried on through the alternative land line.

4. A fault occurred in Malcolm's Inlet near Mussendom station which was repaired immediately it was discovered.

5. A cable six miles long was laid on 3rd July from Manora to the new Telegraph buildings in Kurrachee, thus making the terminus in the Telegraph Office in Kurrachee instead of as before in a temporary building at Manora.

6. During the year four new iron tanks were sunk at Manora, and a range of godowns were completed and handed over to the department.

7. Five tables have been prepared by Mr. Hirz, the electrician. These show at a glance the electrical condition of the cable from the time of primary submersion to 30th April 1866. The four first tables give the insulation resistance after the first and fifth minutes charge (with negative currents)

in millions of units per mile. They are compiled from the mean of the monthly tests from the two corresponding stations of each section. The figures at the head of the tables indicate the mean of the monthly temperature of the testing room at the time when the tests were made. The curves prove that the insulation of each of the four sections of the cable was as perfect at the end of April as when it was first laid.

8. The fifth table exhibits in curves the mean of the monthly Conductor Resistance Tests of the four different sections of the cable in units per mile. Each conductor test consists of a series of observations made alternately with negative and positive currents, the mean of which is taken. These observations are rendered necessary in consequence of the influence of earth-currents, which in some months, especially August and September, are so strong in the Persian Gulf as to equal eight to ten Daniell's cells.

9. The battery power used to work the cable is very low, the longest section (396 miles) requiring only eight negative and ten positive cells.

10. During the period under report 30,411 paid messages were transmitted over the Mekran Coast and Submarine line, of which 16,308 were inward, 12,659 were outward, and 1,444 were local or emanating from the stations in this section. Two statements (Appendices I. and II.) are appended showing the monthly receipts and disbursements.

11. Of the inward messages eighty-six per cent. were from the United Kingdom and fourteen per cent. from the Continent of Europe and intermediate countries. Their destinations were as follow:—

6,859 for Bombay.
4,144 „ Calcutta.
2,196 „ Galle, Australia, China, &c.
3,089 „ other destinations in India.

12. Of the outward messages forty-two per cent. were from Bombay, thirty-one per cent. were from Calcutta, fifteen per cent. were from Galle, Australia, China, &c.

13. Of the total number of messages transmitted, 30,254 were of a commercial or private nature, the remaining 252 were on the Government service. Appendix VI. gives all details regarding the traffic.

14. Thirty-nine complaints, originating in Europe, respecting the loss and serious delay of Indo-European messages were received through the Ottoman Telegraph Department. Three of these only were referable to the Submarine line, the rest to the Indian lines. But the Indian Telegraph not observing the International rules, destroyed their messages, and could therefore only investigate a very few of the complaints, declining to entertain the rest. To prevent injustice this department refunded Rs. 466-6 solely on account of irregularities on the Indian lines for which they declined to account.

15. Sixty-seven complaints were received from India; of these one was frivolous, nine were referable to the Indian lines, six could not be entertained, being made by receiver instead of sender. Eight were referable to the Submarine line, in disposing of which a refund in three cases was granted. Forty-three were transferred to the Persian, Turkish, and other administrations.

16. The average charge for this department on every *inward* message was a little over one rate and a quarter, or Rs. 32 on each received *viâ* Turkey and Rs. 25-8 on each received *viâ* Persia. On outward messages it was rather more, viz. Rs. 32-12 on each sent *viâ* Turkey and Rs. 27-8 on each *viâ* Persia.

17. With respect to the health of establishments, the most prevalent diseases were intermittent fever and diarrhœa,

two hundred and fifty-seven cases of the former and seventy-four cases of the latter having occurred out of a total of six hundred and eighteen cases during the year.

18. The deaths of five Europeans and two natives occurred from the following causes :—

1 European at Kurrachee.....		Acute hepatitis.
1 Indo-European	do.	Suicide.
1 Native	do.	Remittent fever.
1 European at Mussendom....		Heat apoplexy.
1 Native	do.	Idiopathic tetanus
1 European at Bushire.....		Heat apoplexy.
1 do.	do.	Remittent fever.

19. The cable is capable of carrying three times the traffic at present offered, and at same cost of management.

Appendix A is a letter from Colonel Goldsmid, Director-in-Chief Indo-European Telegraph, and a report by Major Smith on the Island of Angaum. Both Colonel Goldsmid's letter and Major Smith's report having furnished sufficient evidence of the advisability of the transfer of the Telegraph Station from Mussendom to Angaum, the subject was referred for the orders of the Government of India, who have submitted the proposal to Her Majesty's Government, and have authorised this Government to empower Colonel Goldsmid at once to seek permission from the Persian Government to commence building at Angaum for a Telegraph Station.

Appendix B is a report by Colonel Goldsmid of his journey through Turkish Arabia and Asia Minor, the subject being divided as follows :—

I. The route, with special reference to Telegraph purposes.

II. The natural products of the soil, and means of obtaining water and supplies.

III. The inhabitants, with some account of the larger towns, and matters of general and political interest.

Appendix C is a letter from Colonel Goldsmid and reports by himself, Major Smith, R.E., and Mr. Johnstone, British Agent at Busrah, of the journey from Ispahan to Gwadur, undertaken by them for the purpose of examining the tract of country lying between Ispahan and Gwadur, with the view to the continuation and ultimate union of the Persian and Mekran Coast land lines of Telegraph.

Appendix D is a letter from Colonel Goldsmid, with enclosure, proposing the extension of an alternative land line from Gwadur through Mekran and Eastern Persia to join the main Persian line between Bushire and Teheran. Government fully concurred with Colonel Goldsmid in the views expressed by him, both as to the necessity for an alternative line, and as to the mode in which its construction should be effected, and recommended to the Government of India that Colonel Goldsmid be invested with full powers to carry out his plan in any method which Her Majesty's Minister at the Persian Court may consider best, and to which the Persian Government may consent. The question has been submitted by the Government of India for the consideration of Her Majesty's Government.

APPENDIX I.

STATEMENT showing the Number of MESSAGES *transmitted and the* REVENUE *derived from the same, also the average time occupied between* GREAT BRITAIN *and* KURRACHEE *and between* KURRACHEE *and* FAO.

Months.	Messages of a commercial or private nature.	Government despatches.	Total Messages.	Revenue of the Mekran Coast and Submarine Telegraph.	Occupied in the transmission of Messages between Great Britain and India via Turkey.						Occupied in the transmission of Messages between Great Britain and India via Russia.						Occupied in the transmission of Messages between Kurrachee and Fâo.						Remarks.
					Longest Time			Shortest Time		Average Time														
					D.	H.	M.	H.	M.	D.	H.	M.	D.	H.	M.	D.	H.	M.	D.	H.	M.	H.	M.	D.	H.	M.	
1865.				Rs. a.																						
May	2,132	18	2,150	64,237 8	..	..	..	..	..	4	18	..	..	..	..	..	..	..	..	..	..	..	..	..	1	43	
June.....	2,396	9	2,405	72,303 0	..	..	..	..	..	5	1	40	..	..	..	..	..	..	30	..	..	..	..	..	1	40	
July.....	1,819	6	1,825	56,529 4	..	..	..	..	..	10	20	30	..	..	..	..	..	..	35	15	..	..	..	..	6	8	35	During part of July cable was broken where no alternative line exists.
August...	1,905	8	1,913	59,480 8	..	..	..	..	..	3	21	1	..	..	..	..	..	..	..	..	..	..	..	..	3	17	
September..	2,518	7	2,525	79,475 8	..	..	..	..	..	4	18	32	..	..	..	..	..	..	10	..	..	..	..	..	1	26	
October ..	3,163	10	3,173	1,00,602 0	..	..	..	..	..	10	2	32	..	..	..	..	..	..	7	7	..	..	..	..	2	14	
November..	2,442	24	2,466	81,592 8	..	..	..	..	..	9	20	..	..	..	..	..	..	..	11	18	..	..	..	..	2	52	
December..	2,925	27	2,952	96,806 8	..	..	..	..	..	9	10	..	..	..	..	..	..	..	13	5	..	11	15	10	2	12	
1866.																											
January ..	2,614	20	2,634	82,783 6	20	..	..	6	43	5	19	10	26	..	..	2	..	..	21	1	50	..	10	30	..	9	..	1	4	
February ..	2,328	44	2,372	74,901 3	6	21	10	7	.	2	9	30	25	21	9	11	23	50	18	16	30	..	16	35	..	10	.	1	36	
March	2,715	52	2,767	87,378 5	9	19	30	2	4	3	17	..	12	20	..	10	20	..	11	15	30	..	10	47	..	11	..	1	14	
April	3,202	27	3,229	1,00,887 15	7	19	30	5	1	3	1	20	15	19	30	5	19	30	10	10	30	1	21	31	..	15	..	3	24	
	30,159	252	30,411	9,56,977 9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

APPENDIX II.

APPEN

STATEMENT showing the Average Monthly Expenditure on account

Year.	Months.	Salaries.			Allowances.	Travelling Expenses.			Stores.		
		Rs.	*a.*	*p.*	*Rs.*	*Rs.*	*a.*	*p.*	*Rs.*	*a.*	*p.*
1865-66 ..	May	20,984	9	1	....	43	8	0	798	10	5
	June.....	21,371	2	8	....	44	0	0	659	12	0
	July	21,333	12	4	....	455	8	0	5,804	6	6
	August.....	21,826	12	7	....	111	4	0	1,240	0	0
	September ..	21,115	14	6	....	1,508	14	0	1,442	3	6
	October	22,816	11	9	....	20	13	0	53	0	0
	November ..	21,487	9	1	....	40	0	0	1,951	1	4
	December ..	21,247	5	11	....	1,271	0	0	209	1	6
	January	22,868	8	0	....	137	0	0	2,124	1	1
	February ..	22,908	6	3	....	1,121	0	0	2,119	9	7
	March.....	22,956	14	0	....	2,656	13	0	4,770	1	0
	April	23,058	10	10	....	178	12	0	2,604	2	7
		2,63,976	5	0	....	7,588	8	0	23,776	1	6
	Monthly average.. Rs.	21,998	0	5	....	632	6	0	1,981	5	3

DIX II.

of the Mekran Coast and Submarine Telegraph for the year 1865-66.

Contingencies.			Construction.	Wages.			Construction Travelling Expenses.	Subsidy.			Total.		
Rs.	*a.*	*p.*	*Rs.*	*Rs.*	*a.*	*p.*	*Rs.*	*Rs.*	*a.*	*p.*	*Rs.*	*a.*	*p.*
4,251	6	1	....	684	14	11	....	....			26,765	0	6
1,504	2	2	....	264	12	0	....	....			23,843	12	10
2,111	13	5	....	853	15	8	....	....			30,559	7	11
1,856	3	11	....	271	4	0	....	3,000	0	0	28,305	8	6
3,807	14	10	....	1,341	2	11	....	....			29,216	1	9
1,945	8	7	....	220	8	8	....	....			25,056	10	0
2,122	14	8	....	607	2	10	....	....			26,208	11	11
2,006	2	4	....	754	2	9	....	....			25,487	12	6
3,201	2	11	....	806	8	1	....	....			29,137	4	1
2,710	9	7	....	502	9	4	....	13,000	0	0	42,362	2	9
2,736	1	11	....	338	2	4	....	....			33,458	0	3
3,687	8	7	....	1,128	0	8	....	5,000	0	0	35,657	2	8
31,941	9	0	....	7,773	4	2	....	21,000	0	0	3,56,055	11	8
2,661	12	9	....	647	12	4	....	1,750	0	0	29,671	4	11

Appendix A.

No. 15 of 1866.

From the SUPERINTENDENT INDO-EUROPEAN TELEGRAPH,

To the SECRETARY to GOVERNMENT, Bombay.

Bombay, 13th March 1866.

SIR,—I have the honour to acknowledge the receipt of letter from your office and accompaniments of yesterday's date, and in reply to forward Major Smith's report on the Island of Angaum, with an expression of my own opinion that sufficient evidence has now been recorded for the transfer of the Telegraph Station to that place from Mussendom, and recommending that the removal be effected as soon as apracticable.

2. The exchange of Bassiduh for Angaum—or the government which we are to acknowledge as rightful owner of one or the other—these are purely political questions into which it is probable that I am not expected to enter. In the general proposal which I am about to submit for future Telegraphic arrangements with Persia, the territory of Bunder Abbas, including Kishm and its dependencies, will be treated as actually found, namely, under the flag of that power. Should my views appear incorrect on conclusions based upon imperfect data, I shall still, it is hoped, be enabled to satisfy Government that they are not put forward hastily or without careful consideration.

I have the honour to be, &c.

F. J. GOLDSMID, Lieut. Colonel,
Superintendent Indo-European Telegraph.

No. 3 OF 1866.

From Major R. M. SMITH, R.E.,
Acting Director Persian Telegraph,

To Lieut. Colonel F. J. GOLDSMID,
Director General Indo-European Telegraph, Bombay.

Dated 28th February 1866.

SIR,—I have the honour to inform you that, in accordance with the instructions of the Bombay Government received at Bunder Abbas on the 7th instant, I embarked on board Her Majesty's Steamer *Amherwitch* and proceeded to Angaum for the purpose of inspecting the island with reference to the proposed removal of the Mussendom Telegraph Station.

2. Accompanied by Mr. Vice-Consul Johnston and Lieutenant Stiffe, I landed on the morning of the 8th at the north end opposite the anchorage, and spent the day in riding and walking over the island.

3. It is a bare rocky islet of oblong shape, about 5½ miles in length from north to south, by 3 in breadth, with scanty patches of cultivation near the north and south ends, and a few shrubs here and there in the centre. The rock consists chiefly of hard calcareous sandstone well adapted for building purposes, and abundance of lime and gypsum may be obtained on the island. On the north side the rocks are rugged and uneven, with peaks from 250 to 350 feet above the level of the sea. The central and southern portions of the island form a plateau having an average elevation of about 100 feet. On a low projecting point at the north end are the ruins of a considerable village now deserted,

and a number of excavated tanks roofed over with stone arches for the collection of surface drainage during the winter rains. Most of them are now filled up, but we saw five or six in tolerable repair full of good drinking water.

4. At the southern end of the island there is a village of 40 or 50 reed huts inhabited by Arab pearl-divers of the Beni Yas tribe, who came from the opposite side of the Persian Gulf and settled here, with the permission of the Sheikh of Bunder Abbas, some ten or twelve years ago. On this side of the island there is no shelter for vessels at anchor, and no good landing-place for boats. The present villagers were obliged to choose it as the northern end was pre-occupied by other Arabs, whom, however, they have recently killed or driven out of the island.

5. A short distance from the village there are a few young palm trees, and two wells of bad water, which, although clear and fresh, is of a disagreeable half putrid taste. The Arabs told us, moreover, that it becomes worse in summer.

6. Of the healthiness of the climate I have no means of forming a decided opinion, although there is no apparent reason why it should be otherwise than tolerably good. It is probably similar to Bassiduh, a climate which must be well known to many officers of the late Indian Navy. The heat in summer must no doubt be very great, as at every other place near the mouth of the Persian Gulf.

7. The advantages of Angaum over Mussendom (which I visited the following day) seem to be—

1*st*.—Its greater openness and exposure to the breeze, Mussendom being closely surrounded by high, bare rocks.

2*nd*.—Its much greater extent, Mussendom being so small that no space is left unoccupied by the necessary buildings in connection with the office.

Sketch
OF
NORTH END OF
ISLAND OF ANGAUM
from a Survey by
LIEUT.T STIFFE
Scale 1 inch - 1000 Yards

3*rd*.—Its position as affording greater facilities for communication with other places, and particularly with the mail steamers at Bunder Abbas.

4*th*.—The fact that fresh water may be obtained in the island, while at Mussendom it has to be brought in boats from a considerable distance.

8 The anchorage between Angaum and Kism appears to be good and easily approached, and immediately opposite, behind the projecting point on which the ruined village stands, there is a well-sheltered beach for landing in boats.

9. Should it be decided on removing the Telegraph Station to Angaum, the site I should recommend for an office and dwelling-house is the point marked A on the accompanying tracing of Lieutenant Stiffe's sketch of the northern portion of the island. It is close to the landing-place and the water tanks, and pretty well exposed to the prevailing winds. It is about 40 feet above the sea; and although slightly under the lee of the higher ground to the westward, it is not so much so, I should think, as to affect the temperature perceptibly. A more exposed position might be chosen at the south end of the island on the plateau above the modern village, but it would be inconvenient in other respects.

10. There is no doubt that the island of Angaum belongs to Persia as much as Kism or any other, portion of the Bunder Abbas territory. I believe it is not expressly mentioned in the treaty between the Persian Government and the Sultan of Muscat, being probably looked upon as part of Kism, but it is certainly considered by the Arabs themselves at Bunder Abbas and Angaum as belonging to the district farmed from Persia. I have therefore no doubt that it would give great offence to the Persian Government if we erected buildings or formed any establishment on the

island without their consent. This, however, might perhaps be obtained by our offering to give up Bassiduh as a coaling station and take Angaum instead.

11. In erecting permanent buildings, whether at Mussendom or Angaum, I would most respectfully suggest that two-storied buildings with flat roofs be adopted instead of sloping-roofed houses of only one story. Upper rooms in such a climate are unquestionably better than those on the ground-floor for sleeping in, and flat roofs with light parapet railings, and temporary awnings to keep off the dew serve as excellent bedrooms and evening sittingrooms during the great heats of summer. The lower rooms of the dwelling-houses, and especially the instrument room, should also, I think, be provided with the "badgirs" or wind towers so universally used in Persia.

I have the honour to be, &c.

R. M. SMITH, Major, R.E.

(True copy)

F. J. GOLDSMID, Lieut. Colonel.

Appendix B.

No. 33 of 1864.

From Lieut. Colonel F. J. Goldsmid,

On special duty,

To the Secretary to Government,

Political Department, Bombay.

Constantinople, 31*st December* 1864.

Sir,—With reference to former correspondence in the early part of the present year, I have now the honour to submit to the Right Honourable the Governor of Bombay in Council the papers specified in the margin, prepared on arrival at this capital last August. The overland journey through Turkish Arabia and Asia Minor to which they refer was undertaken, it will be remembered, in accordance with the proposition of Colonels Kemball and Stewart, C.B., under the full approval of the Bombay Government, and with the express sanction of the Sublime Porte, communicated by Her Britannic Majesty's Ambassador at the Ottoman Court.

No. I.—Memorandum on the march from Bagdad to Izmid, with accompanying letter to Lieut Colonel P. Stewart, C.B.

No. II.—Memorandum in French, considerably modified, and arranged for the ready comprehension of the Turkish authorities.

No. III.—Rough Diary from Jezireh to Angurch, with Mr. Kersting's continuation up to the port of Izmid.*

2. I left Bagdad in company with Mr. Kersting, a gentleman connected with the Anglo-Indian Telegraph, and Ahmed Effendi, an Egyptian engineer specially deputed by His Excellency Namik Pacha, on the 19th May last, and

* Withheld for the present owing to bulk and non-importance.

reached Angurch, in Asia Minor, on the 30th July. The distance, about 1,054 miles, was accomplished in seventy-three days, the average of marches, exclusive of halts, being 18 miles, and inclusive of them 14½ miles per diem. From Angurch to Izmid, a further distance of 210 miles, I posted in about 3½ days, and from Izmid the Gulf steamer conveyed me in eight hours to Constantinople.

3. Adopting to some extent the sections of my printed report on the Mekran mission of the 22nd February 1862, I would make the present subject divisible as follows :—

I. The route with especial reference to Telegraph purposes.

II. The natural products of the soil, and means of obtaining water and supplies.

III. The inhabitants, with some account of the larger towns, and matters of general or political interest.

4. On the first of these the enclosed papers will perhaps give all the requisite information. It had been my intention to have modified and condensed them, but time and opportunity having failed me, I have thought it better to submit them as originally drafted. I will now proceed at once to the second head.

II. Natural products of the soil, water, and supplies.

5. At Bagdad it is the custom of residents when the hot weather sets in to remove from the ordinary place of abode to the *serdab* or underground house. My departure from the city was just at this particular period of domestic migration. The heat was great during the day, nor was it likely to decrease until we had got fairly out of the lower valley of the Tigris. Under these circumstances we were in a condition to appreciate the value of water as well as to feel the want of that most essential element, and certainly in this respect the country east of

the Tigris is blest in a remarkable manner. The Dayala, the Greater and Lesser Zab, and the Hazir or Khazir, with the less perennial Taok and Tuz Khunnah Su, may be classed as actual rivers occurring between Bagdad and Mosul, all having their source amid the snow-covered mountains of Kurdistan. In addition to these are canals and subsidiary streams. Of the affluents, the Khalis, near Bagdad, has brought down a sufficient volume of water during the present year to cause a stoppage of some weeks on the telegraph line.

6. Beyond Mosul, again, there is no lack of water to Jezireh. Though rivers do not cross the road like those above mentioned, there is one, the Khabur, which is by no means insignificant. We had to swim our horses across it, as at the passage of the Tigris and Zab Su. Many minor streams are encountered, and water-mills are not unfrequent. The mill at Gerishekist, a charming little Christian village about twelve hours' north of Mosul, is an admirable illustration of romantic scenery.

7. But the grain-fields are even more remarkable than the abundant supply of water in this country between Bagdad and Jezireh. In many places, especially near Mosul, the wheat and barley extend as far as the eye can reach. East of the Tigris, and between the Kurdish mountains and the river, there is no lack of the staff of life, and the amount carried down to Bagdad must be considerable. At Altmo Kiupri, on the Lesser Zab, I observed a raft loading. It is said that they reach the Tigris from this point in eight hours, taking wheat, barley, and tobacco. Near the low, rocky ranges of hills, such as the Hamrin and others near Kifri, the soil is less productive, perhaps because cultivation is less attempted. Here, however, the verdure of the plains would render the term "desert" inapplicable, and if the population were not few and scattered rich harvests might reasonably be anticipated.

8. Flocks and herds abound, as might be expected among a people whose habits are essentially pastoral, such as the Arab and Kurd of these tracts. Indeed as regards fresh provisions the traveller is here better off than in India, for if he please he may have constant supplies. Fowls are almost everywhere abundant. Milk, in the pure form, or in the sour stage (Shanina), or in more solid curds (Yoghurd), known in India as *Dai*, is to be procured in every village unaffected by desertion or decay. The cheeses are somewhat void of flavour, but not to be despised.

9. Fruits of some kind are to be found in the larger villages. The most common is the small apricot, called by the Arabs "mishmish." Ice was brought from the town of Arbeil to the Kurdish tent in which we were located, and proved highly acceptable. Wines are made both at Kerkuk and Mosul.

10. Crossing the Tigris for the first time at Jezireh, and ascending into what may be called Upper Mesopotamia, the country does not certainly improve in fertility. But in spite of the absence of those vast sheets of corn which cover the valley or plains of the Tigris to the eastward of the river, a new vegetation presents itself to the eye in these rugged highlands which has its charms for the traveller. Before reaching Mardin we come upon a most refreshing garden-land, a land of the walnut, plum, cherry, and apple tree, of vines and of flowers, of cascades and running streams. The general characteristic is perhaps the barrenness of stunted Indian jungle, but in examining the crannies and the defiles these attractions come to light. Between Mardin and Diarbekir, even amid many hard and inhospitable-looking hills, there is to be discerned at intervals a fine rich soil; but the general appearance of fertility falls far short of the plains east of the Tigris, and rock or stone prevail. Water is ample, either from rivers, streams, or roadside fountains. These last increase in number

as we approach Asia Minor. At Mardin and Diarbekir supplies of all kinds are procurable and to almost any amount.

11. From Diarbekir to Kharput there is a good deal of cultivation for the first two stages, and up to the foot of the mountain range of which the Argana hill is the more remarkable outwork, with sufficient water from canals. The passage of the Batman Dagh is not altogether sterile, for we found amid one of its wildest and most romantic valleys a village or two yielding a fair portion of the necessaries of life. And from hence to Kharput we have first a fertile plain, then a steep mountian called the "Deva Boynun," or Camel's Neck, and lastly the Kharput plain itself, which holds villages teeming with supplies of every description.

12. Kharput may be considered a good halfway point between Bagdad and Izmid. Taking at one glance the whole of the second half, my own experience tells of abundance in most places, of sufficiency in many, and of want in very few. I would confine those few to the right bank of the Euphrates, and when we were turning our heads again northwards to Sivas; for although the roads through Asia Minor are not strictly through unbroken fields of grain, as near Mosul, ample stores could, it is presumed, be always gathered in for the large towns of Sivas, Yuzgat, and Angureh, leaving enough for domestic consumption to the agricultural population without. Our march was a continual harvest-time, for the number of weeks occupied in travelling onwards was just the difference required to mark the respective periods at which the sickle is brought into the cultivated plateaux of Asia Minor, in contradistinction to those acknowledged in the plains of Turkish Arabia.

13. We had very little rain or bad weather. Perhaps our hottest days were passed in the Kurdish tents at the end of May and beginning of June when the thermometer was as follows:—

These are the particular hours at which it chanced that a record was taken. Higher figures would doubtless have been shown had all accounts been taken at noon.

In tents at Yarimja 10 A.M. 100°
Do. Girdashina 9 A.M. 92°
Do. Keremlik 8½ A.M. 102°
Do. Zab Su midday 107-8°

14. As regards the more notable products of the soil in Asia Minor, I regret having had no opportunity of visiting the copper or coal mines,* though at no great distance from the former. The vast forests of oak and fir I was able to admire, and also to make inquiries on the cotton cultivation in parts of the country where the plant has been most cared for. A letter which I addressed on this subject to Mr. Cheetham, junior, of Staleybridge, having found its way into a recent number of the *Cotton Supply Reporter*, I will confine myself at present to a mere mention of the fact that the mind of the Turkish producer is not in a state to admit of his making outlay of his own accord either in the introduction of a new seed or extending the indigenous produce with marked success. He is apprehensive that the price now given for the okat† of 26 piastres would immediately fall to the old figure of 6 piastres if the American war breach were healed. Very good cotton is produced near the Kizzil Irmak, but of short staple. On a specimen sent by me to Manchester it was reported questionable whether, when the long-stapled cottons should have sunk to their old-fashioned level of price, such short cottons as these would not be beaten out of the market altogether.

* Lead and silver might be added.

† 2¾lbs., and 5½ piastres being about equal to the shilling. The prospective fall would be from about 1*s.* 8½*d.* to 4½*d.* a lb.

15. An hour's halt at the dwelling-house of the managers of the saltworks between Ulach and Sivas enabled me to make inquiry on a not unimportant item of the revenues in Asia Minor. This place bears the name of Tuzlu

Prinwar, the fountain or spring of salt, but its actual realisation in coin is set down at no higher sum than 40,000 piastres (about £364) per annum. They explained, however, that it was the total revenue of the Asia Minor salt-springs which was considerable, and that this one formed but a part of the whole system. My informants were managers on the part of government, receiving a fixed salary to make the most of their charge, but under no contract for a stipulated sum.

16. Asia Minor abounds in hot springs, sometimes hot and cold combined. Among those described in the vicinity of my route were the following :—

1. At the Yelduz Su, about fifteen miles west of Sivas.
2. At Kohineh, near Yuzgat.
3. At or near Amasieh, called "Kaoza Chermik."
4. At Kizzilji Kui.

The first I spent a whole morning in visiting. Having ascended a rocky eminence about three or four hundred feet above the level of the surrounding plateau, I came upon a deep fissure in the backbone of a narrow isolated ridge choked up for the most part with wild flowers and grasses. This led the way to large and small pits or holes which had once evidently been active springs, and eventually to live springs themselves rising in oval or circular basins of tepid water, the largest of which may have been forty feet in circumference. The ridges average perhaps fifteen feet in height; the slopes are gentle, the backbone is sharp; in one place only among the extinct springs was the trough of any breadth or extent. Where the springs were active the water was trickling down in all directions. They rise in little globules just about the surface of the basins, and it is difficult to count them. One rises almost in the other, in appearance, from under the water. The neighbouring ground is hard stone and sand. People bathe

here, and the waters have healing properties, though I could detect in them no sulphureous smell. I reserved the experiment for Kohineh, where an excellent public bath has been constructed, into which the waters of a hot and cold spring are led in a manner that the supply can be regulated by the bather.

III. The inhabitants, with some account of the larger towns, and matters of general or political interest.

17. Appended is a list of stages from Bagdad to Angureh. For eight out of the first fourteen marches, or up to the Zab Su (ancient Zabates), my bivouac was in a Kurd or Arab tent, and far preferable was this to being quartered in the mosque, konak, outhouse, or stable of a so-called town. In the one fresh air and comparative freedom from filth and vermin were at least obtainable, in the other nothing could compensate for the confinement and uncleanliness. Beyond the Zab we came upon Christian villages, and these continued more or less in the neighbourhood of our road to Mosul up to the banks of the Tigris. We met with others again on moving upwards to Jezireh, and between Jezireh and Mardin there are a considerable number. It was pleasant to feel amid a Christian community, but I am sorry to acknowledge something like disappointment at the first impressions obtained at the Chaldean village of Tell Keif, our day's march from Mosul. Not that there was positive lack of hospitality, but the welcome, such as it was, could scarcely be considered genial or unmixed with suspicion. However it must be borne in mind that we were accompanied by Mahomedan officials, a circumstance sufficient of itself to account for shortcomings. The best method of discriminating between the sects I found to be to consider the two great divisions called in the country Chaldeans (Caldani) and Syrians (Suriani) as no other than Nestorians and Jacobites, the former of these designations being their own, and the latter that applied to them by the Romish

section of the Oriental Church, which holds them as schismatics.

18. Of the Arabs we saw little after passing Mardin, or of the Kurds after leaving the banks of the Euphrates. To our hosts among both I have every reason to feel grateful. Their hospitality was plain and straightforward, simple, and void of all ostentation. It was as much the instinct of their nature as the dictate of their religion that it should be offered to the traveller, whatever his rank or creed, and there was no *arrière pensée* of remuneration. No doubt that it is just as well to give on parting a sum of money equal to, if not in excess of the probable cost of entertainment, but I would add, if opportunity offer, a trifling token of good-will, such as a silk kerchief or nick-nack for a woman or child. I found this arrangement tell with excellent effect at the villages of Bayat and Izz Oghlu. In the former a poor infant was immediately adorned with the trophy, in the latter it became part and parcel of the new-born hope of a Kurdish family. The appreciation of the gift was so hearty and sincere that I regretted I had no large supply wherewith to mark our progress westward. But it is not only as furnishing me with a night's or day's lodging and shelter that I remember the Kurds. It sometimes fell to our lot to halt for an hour or so in the midst of a long hot march, and seek refreshment at their hands both for ourselves and cattle. The bread-cake, curds, and omelette, all these were soon got ready and placed at our disposl. These good folks never appeared to be put out, or in hesitation while giving us the best of their domestic fare.

19. We had heard of the Yezidis, and passed two or three of their encampments, but it was not our fate to be quartered upon their hospitality. Not so, however, in the case of the Kizzilbashes. Of this class we came upon several villages between the Euphrates and Sivas. To judge from the

character given to them by the Turkish telegraph officials, their morals are of the worst description, and they have practices such as acknowledged by the Yezidis; but I do not put implicit faith in these assertions. Recent inquiries lead me rather to the belief that the fact of their being Shias is the great reason why the Sunni Turks shun and keep separate from them. Among the lower order of Asiatics a distinction of this kind is quite sufficient to account for scandal and defamation up to any amount of invention and falsehood. I have heard it denied that the Kizzilbashes are even Mahomedans. They did not appear to me to be Persians, as their name would infer, a name, by the way, which I was warned not to apply to them openly, as they did not accept it with the same readiness with which it was applied to them by others.

20. The Turcomans are numerous in Central Asia Minor and west of Sivas. Their former social and political importance may be judged by the fact that the large town of Yuzgat owes its rise to one of their chiefs or Dera Beys. They are a wealthy and well-disposed people, owners of lands, villages, and cattle, but their occupation under the present government appears restricted to farming and agriculture. At the village of Hussun Bey, or Bey Obahsi, about sixteen miles east of the Kizzil Irmak at the Angureh road ferry, I was quartered in a large house belonging to the headman of the place. The servants were ready to provide for the wants of all travellers, and remuneration was strictly forbidden to be received. The inconvenience to an Englishman in this kind of accommodation is its publicity, and there is a disagreeable necessity besides involved of getting up continual conversation with so many strange visitors, few of whom have any interest in a traveller's movements unconnected with personal advantage.

21. Among the many Armenian villages that we passed after once entering the plains of Kharput we once or

had occasion to seek a breakfast or a night's lodging, and there was no reason to complain of the reception afforded us. The work of the American missionaries exclusively with this people is of a most interesting kind, and my obligations to these gentlemen for their kindness and attention to my companion and myself are not to be easily effaced. A brief report like the present is hardly the proper place to enter into any detailed account of their labours. But I may mention that their presence at Mardin, Kharput, Sivas, and Yuzgat, seemed to me likely to produce highly beneficial results. There is a strange mixture of heaviness and smartness about the Turkish Armenians, a remark which may be said to apply equally to the physical as the moral formation. It struck me that while there were many handsome faces there were few symmetrical forms, and this in the case of both men and women. As a rule all classes speak Turkish, though I am not sure whether as much can be said of their acquaintance with the language of their forefathers.

22. As for the genuine Turks or Osmanlis, the actual rulers of the soil, take them *en masse* and there is much to admire. Take them *individually* and there are doubtless many specimens of humanity which will not only provoke the criticism of their European brethren, but oftentimes their hatred and contempt. Take them *by classes*, and although the distinction of high and low, rich and poor, is not defined as with us, there is still the barrier dividing Dives from his humbler fellow, and showing the latter in the far more advantageous light. For my own part I have every reason to be satisfied with the civility and attention shown to me, whether by the officials who met me at various stages and escorted me from place to place, the kind hosts who received me, or the pachas and men in authority at the larger towns. In the first instance, and indeed up to Khurput, I had come as a simple traveller, and the "buymilti" or "perwana" of Namik

Pacha, with which I had been provided at Bagdad, had seldom been required to aid me on the road. But a slight change was perceptible as we entered Asia Minor; and I was surprised to find a regular "Istikbal" sent out from the pacha both at Sivas and Angureh. The pacha of Kerkuk I had not called on. At Mosul we had been lodged by Mr. Vice-Consul Rassam. The pacha of Diarbekir was most friendly, and it was no doubt at his own instigation, as we knew it to be out of his own kitchen, that his Italian doctor gave us an evening banquet. The pacha of Kharput was absent on our arrival at Malatyah. At Sivas we were shown a house assigned to us, but we preferred staying at the telegraph office. At Angureh the pacha housed us, supplied us with servants from the palace, made us live as his guests, and paid us a friendly visit at our lodgings. This was the last head-quarters of a pacha at which I arrived before taking post-horses.

23. I could not avoid remarking two prominent features in the character of the modern Asiatic Turk as he appeared to me in my progress from Bussora to Constantinople —one was his comparative freedom from bigotry and prejudice, the other his general inclination to European customs. It may be that habitual association with the Indian Mussulman had led me to expect a different state of things, and that the contrast presented an unusually strong light. It may be that I lived too much among the servants of Government to judge fairly of the true feelings of the people. Certain it is that if religious toleration is practised under the "Khat-i-Humayun" of 1856 to an extent heretofore unknown in European Turkey, the spirit of the act is working also in Asia. But at the same time I would by no means affirm that the so-called civilisation of Young Turkey is void of grave objection. The lowest Parisian tastes do not improve, nor does the assumed importance of a London clerk or shopman edify. Knowledge of French in the Turkish army is spreading,

and might be turned to excellent account, but it is too often made available for immoral talk and empty display. The attainment to government employ in demi-European offices like the telegraph is in like manner frequently made the means of exhibiting an offensive *nonchalance* and indifference to the public. But there is really so much to remedy in telegraphic organisation, both indoors and without, that a passing remark can hardly affect the subject. Not only are messages generally known to the employés upstairs, but the menials down below come in for their share of the diffused knowledge. It will require some training to appreciate the necessity of keeping silent on the affairs of others; it will require some strong pressure of practical business to show that what has been imagined a pastime is in reality serious, hard work; and theoretical and practical acquaintance with telegraphy *as a science* will have to be acquired as well as mere manipulation. These matters have, however, been treated to some extent elsewhere, and reference is accordingly solicited to the enclosures.

24. The chief towns which I visited on my route were Kerkuk, between the Tigris and the Kurdish hills; Mosul, Jezireh, Mardin, and Diarbekir, in Mesopotamia, reading the name in its literal sense, for all these places are on the right bank of the Tigris,* and consequently between the rivers; Kharput, which some may include with the last four; Sivas, Yuzgat, and Angureh, in Asia Minor.

I was too short a time at Beibazar, Mudurli, and Izmid to add them to the number.

25. A few desultory notes on each of the above places may not be without interest.

* The main source should be near the Ghyuljik Lake and still nearer to Argana Muden. But both the Tigris and Euphrates have many sources, for every feeder may claim its right to partnership.

Kerkuk.

The information which enabled me to record that this is a town of about 2,500 houses and 10,000 inhabitants appears of doubtful accuracy. These figures may represent two-thirds of the real number. There is an upper and lower town, the former enclosed within walls, and covering the flat top of an abrupt hill about 150 feet high ; the latter, scattered over the plain below Kerkuk, is the seat of a pacha, who is under the authority of the governor general of Bagdad. We were housed in the lower town, which is very filthy. The streets are irregular and ill-constructed. There are a few shady and pleasant fruit-gardens to which the inhabitants resort in hot weather. The telegraph office is a large and roomy building, but the pacha has converted the best part into a prison! There is something picturesque in the first view of Kerkuk. It looms out in the distance like the background of an Oriental stage melodrama. It is just the sort of scene which would foreshadow the coming of the conventional stage pacha, accompained by Turks, Arabs, Kurds, men and women with scimitars and choruses. The more classical and famous Arbeil, or Arbela, which we passed without entering on our third march from hence is about fifty-five miles off in a northerly direction, and has a very similar appearance. I was told there were two Chaldean churches at Kerkuk. The mound on which the citadel is built is probably artificial.

Mosul.

26. Mosul is too well known from the works of recent travellers and explorers to need any particular description. Nearly thirty years ago Mr. Southgate, a missionary of the American Protestant Episcopal Church, estimated its population at 40,000, of which 6,000 were Christians. The

accounts given me were conflicting, but I am of opinion, on good authority, that the proportion of Christians to the whole number of inhabitants is greater than fifteen per cent. Before crossing the Tigris to the town we looked at the scene of the Nineveh excavations, and entered the Mahomedan musjid at Nubbi Yunas. Mr. Rassam thinks this last must have been at one time a temple of fire worship from the blackened appearance of the roof. The town of Mosul is dirty and irregular, but its Moorish doorways are pleasant to the eye, and there are many quaint, old-fashioned figures seen beside them which almost recall forms and faces of our own country in the reigns of Henry VII. and Edward VI. Some of the children are especially beautiful. I was introduced here to the Chaldean patriarch, a Chaldean bishop and Syriac bishop of the Romish Church, and visited with the latter the Chaldean church of the "Miskinta" and his own cathedral. All are built of marble obtained at a comparatively trifling cost in the neighbourhood of Mosul. The interior of the cathedral is well proportioned. It has its two aisles and altars, and the centre archway and altarpiece are remarkably handsome. It appears that these churches have communication with those of Malabar, and are a branch of the Romish Propaganda. The telegraph office is a good, roomy building, situated near the pacha's palace. I have already remarked on the utter uselessness of bringing the telegraph wires to Mosul at all, It is perilling the whole line of telegraph to suit one man's convenience. Were the station on the other side of the Tigris, a single wire might, if necessary, be supplied to the pacha; but at present the two wires from Constantinople and two from Bagdad are all dragged across the most precarious bridge and ferry for no necessary object whatever, and at enormous risk to our Indian communication, especially in the spring of the year.

Jezireh on the Tigris.

27. Once the principal city of the Chaldeans in the low country. Its towers and walls and ruined Moslem bridges are picturesque in their way, but the place is unhealthy and unattractive as a residence. I have no data of the number of inhabitants, but should not put them down at 10,000. It is famous for a striped cotton cloth which may be used as the "lungi" or waist-band of Sind, or as a hat-turban. The telegraph office is a barn, and a most unsavory one, yet it appeared to be the best place in which we could find accommodation. I was glad to leave the town after a day's halt there, and seemed to breathe more freely on attaining the summit of the high land behind it and overlooking the valley of the Tigris.

28. We arrived here at about 1 P.M. on the 17th June, an intensely hot day, riding up a good road from the foot of the hill to the gate of the town. From this point to the telegraph office our passage was along a dirty, steep and stony street. We enjoyed a cool breeze on opening out the southern aspect of the hill, and a grand view across the wide plains of Mesopotamia, comprising a vast extent of low, level country so far as the eye could reach. Mardin is picturesquely situated on the slope of a limestone rock, the apex of which is surmounted by a remarkable ancient fort. The houses of the town are solid, and many comparatively good, but there is dirt and misarrangement everywhere. The telegraph office is small, and most inconveniently situated for the security of the whole line, but the instruments appear to be well cared for and in good order. Mr. Williams, the intelligent American missionary here, reckons the population of this place at about 22,000, of whom one-half are Christians. Two-thirds of these, again, are put down as Roman Catholics; so that 7,000 Papists and 3,500 non-Papists may be held to represent the approximate numbe

of each division. Mardin merits a much longer and more detailed description than can be given to it in the present report, for it is a place of much historical and local interest, and there is a host of legends commemorating its importance, and relating to its immediate neighbourhood. The inhabitants are called Mardili; and the Mahomedan portion consists chiefly of Arabs and Kurds, the common language of the market being Arabic. Mr. Williams thinks there are no Roman remains here—certainly no walls. It may be that the vicinity of Dara and Nisibin gave rise to the supposition. The light cloak or "aba" of Mardin is an elegant and inexpensive article of manufacture, highly prized by those who have seen the better specimens. The government here is exercised by a "Majalis," or assembly composed of mixed Mahomedan and other members, and presided over by a "Kaim-Makam," under the authority of the pacha at Diarbekir.

Diarbekir.

29. Once a place of much commercial importance, and although not up to the mark of former prosperity, its central position would seem sufficient to preserve it from decay. I learn that there are about 20,000 inhabitants, of whom nearly half are Christian. Mr. Southgate reckoned that there were about 2,700 families, of whom 1,500 were Mussulman, and this statement rather serves to corroborate that made to myself than otherwise. The town is agreeably situated on the right bank of the Tigris, and there are neat little country-houses outside the walls which make a residence there tolerable. But the heat is very great, and, like all Asiatic towns, the streets are irregular and confined. The telegraph office, where we resided, enabled us to prove the climate within the walls. I was eager to escape from it, notwithstanding an intelligent host and hospitable reception. From hence there is a line of telegraph with two wires leading to Orfah and Aleppo.

30. While halting for a day at Diarbekir a native of India was brought in by the Mudir or head of the office, and presented to me as Haji Baba, an astrologer. I did not much like his looks; he might have been a mutineer, a refugee, anything. To my thinking the face was that of a ship-lascar, or little better, but the man had a wonderful smattering of knowledge. He had no look of the higher-class native. With a dash of the faquir there was something besides of the ordinary munshi or teacher of Hindustani. He had a dark and unmistakeable Indian skin and complexion; his long, oiled, and curved hair was combed down behind the ears; his manner was such as I have often seen in Indians desirous to dazzle by display of general knowledge. He took occasion to show off his handwriting, and to talk of officers whom he remembered, at least by name (Roberts and Wray). I was puzzled to think who this man was, whence came his fine clothes, and when and why he had left his native country. His own story was that he lived in the Bendi Bazaar at Bombay; that he had quitted India about fourteen or fifteen years before the annexation of the Punjaub; that he constantly travelled; had visited Bokhara and Astrakhan among other places, and had heard of Colonel Stoddart though he knew little about him. His age might be thirty-five, but it is hard to say exactly. They told me that he practised as an astrologer, but took no money; that he appeared to have a sufficiency both of money and clothes. He had seen and conversed with Mr. Taylor before he left, but that gentleman was away from Diarbekir at the period of my visit. The man spoke Arabic awkwardly, but well for an Indian; his Persian was Indian and fluent; his Hindustani was naturally faultless.

Kharput.

31. Though Kharput is the name given to the telegraph station, the real Kharput is at about three miles' distance, at

the summit of a hill not far from a thousand feet in height. The telegraph station is where the pacha's serai is, at Mazra, on the plains below. The derivation of the word "Kharput," or "Harput" was explained to me to be from two Armenian words signifying "stone castle." Mr. Brandt and Lieutenant Glassscot estimate its heighth at 4,832 feet above the level of the Black Sea. The view of the Kharput plains, coming up from the Deva Boyun mountain, to the southward, is magnificent. Some idea of the extent of low country may be formed from the statement that the Murad Chai (or Upper Euphrates), one of the largest rivers of Asia Minor, appears like a minor canal or stream in the midst of the plain through which it winds. I observe that the population of Kharput is estimated at 1,720 families. This would not, of course include Mazra, a place which resembles in the distance an Indian cantonment rather than a common Asiatic Turkish town. Besides the pacha's residence and telegraph office, it contains also the "kishla" or barracks for troops. The productions of the soil in the plains here are abundant, and the numerous villages seem rich and flourishing. The bazaars in Kharput are not remarkable. The Armenians are the bulk of the Christian inhabitants. Schools have been opened by the American missionaries, who have also a chapel for the Protestant congregation.

Sivas.

32. We descended into the plains on which Sivas is situated from a considerable height, crossed a bridge over the Kizzil Irmak built by Sultan Murad, and entered the city. Its aspect from without is pleasing. Dotted here and there with trees, at times in large extended clusters, the houses and citadel occupy a considerable space, and are much scattered. Dr. West, the American physician resident here with the missionaries, a gentleman of unusual experience in these parts, reckons the population at about 40,000 to 50,000

souls, and the Armenians to have more than 2,000 houses which might represent a fifth part of the whole. The climate is delightful in the hot weather. We were here in the middle of July, and the thermometer was 78°. There are many interesting monuments at Sivas. We visited what are generally called the tombs of the Seljuki. Germanise the pronunciation and we may read "Seleucidæ," according to Mr. Latham's ingenious and not unlikely theory. These are truly fine buildings, but from the inscriptions appear to have been erected at no earlier date than 670 of the Hejira, about A.D. 1271-72. The actual tombs may, I think, be traceable to an earlier period. They are stated to be those of Kai Khosrou and Kai Kobad, but the inscriptions above the door gave, so far as I could decipher, Kai Khosrou only; and may not this be a mere title? The main buildings are two quadrangles, one facing the other, in a narrow street, with remarkably fine gates, the largest of which may be seventy feet in height, with two cupolas or minars of forty feet. There is another building of similar kind at a little distance, but all seem to have been comprised within one set of strong stone walls; probably the ancient Sebaste. The one quadrangle contains the Medresseh and Turbet, the other may have been the mosque. Sivas was undoubtedly at one time under Persian occupation. Marco Polo, writing in 1213, describes the Greater and Lesser Armenia, and places Sebaste, as the king's residence, in the latter. Wine is made here, but not nearly so palatable as that of Kharput. I met another Indian at this place. He is said to be a petty trader, but is treated with much more regard by the Turks than his appearance would warrant.

Yuzgat.

33. The town of Paswan Oghlu, who, according to good authority, held an independent dominion over all the east of Asia Minor. Yuzgat is still an important place, and may

have its 10,000 or 15,000 inhabitants. There is something very desolate and dreary in the approach to it through the hilly country on the Sivas side, but its mass of houses, interspersed with mosques and minarets, breaks upon the traveller with much of Oriental beauty and effect. The telegraph office is situated in the heart of the town, and nothing can be worse or more slovenly than the mode in which the wires find their way out to the posts on the Angureh road. I attended one Sunday at Yuzgat the Protestant service at the American Mission chapel. The missionary, Mr. Farnsworth, performed the whole in Turkish, and preached with great ease and fluency. There were about a hundred present. I myself counted thirty men and fifty boys, and I was told that there were more females than enough to make up the three figures. These are separated from the rest of the congregation by a wooden trellised wall. They can be seen, and their children heard, but that is all. The arrangement is a good one for an Eastern country. There were three or four good faces among the boys, but on the whole the congregation looked not only poor, but untidy and far from clean. I may add that one or two exceptions were notable, and it was an agreeable surprise to me to find that after the service some half-dozen very respectable-looking men came up spontaneously to shake me by the hand as a new-comer. Many boys were tired, some unsteady, but as a whole this Armenian Protestant congregation was very orderly and attentive.

Angureh.

34. The Turkish pronunciation of this word, which we sometimes miscall "Angora," is one which would induce me to spell it "Engureh." It is a place of great interest, both from its very remarkable Roman remains and its own picturesque beauty. Its historical associations are, moreover, such as to ensure for it the attention of all inquiring travellers. I could

do little more than ride round the base of the hill and admire the landscape. The southern aspect of the citadel was that which struck me the most, when the fort was divested as it were of the town, and stood out alone in real grandeur. I never saw a much more picturesque effect of the kind: it was not unlike what many of us must have often admired in the Castle at Edinburgh. The morning after arrival I was able to pay a hurried visit to the Roman hall, where the monuments and inscriptions are still in excellent preservation, but the necessity for my early departure, in answer to a telegram from Constantinople, prevented me from attempting any researches. Murray estimates the population at 20,000, of whom a third are Armenians. This certainly does not appear an over-statement.

35. The famous goats, producing a wool renowned over Europe, are exquisite little animals, and abound in the vicinity of the town from which they derive their name. It is said that they are only found within certain circumscribed limits, which may be defined as between the west bank of the Kizzil Irmak and Sevri Hissar, the latter place marking the most southerly point, and the Black Sea being the northern boundary. A space of five hundred geographical square miles may here be assigned, from which removal would cause deterioration. It is a known fact that if transferred to the east bank of the Kizzil Irmak they suffer from the *mal du pays*. Many are lost from exposure, but the losses are made up for by breeding with common goats, and caste is supposed to be recovered in the third generation. The Angureh goat gives one oka, or forty-four ounces avoirdupois of wool; and the quantity supplied throughout the wool region is estimated at from 350,000 to 400,000 okas, *i. e.* 962,500 to 1,100,000 lbs. From the same authority it appears that 40,000 okas (110,000 lbs.) are expended in thread manufacture in Asia Minor itself, of which more than half is sent to

Holland, and 8,000 to 10,000 okas (17,600 lb.) are converted into home-made shawls and stuffs.

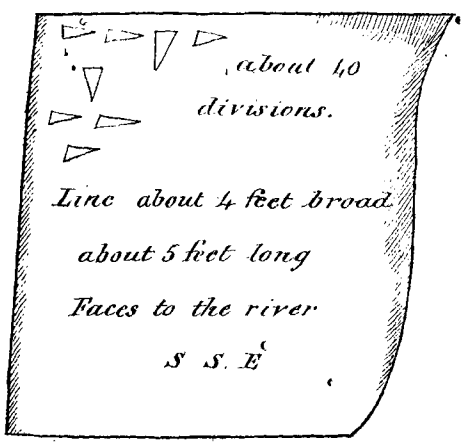
36. That the present report is necessarily rambling and meagre will, I trust, be excused from the circumstance that I have no office, and few references besides my own diary and notes. These, if I were to draw on them too freely, would lead me into questions foreign to the purpose. I will now conclude by a brief account of the lake know as Ghyuljik, and an inscription observed on the left bank of the Euphrates near the Malatyah ferry.

37. Ghyuljik, the "little lake," is situated in lat. 38° 25′ N. and long 39° 30′ E., between the mountains know as Batmon Dagh and the "Deva Boyun," or Camel's Neck, overlooking the vast plains of Kharput. Its extreme length from E. and by N. to W. and by S. is barely ten miles, and it may have at most four miles of breadth. On its southern side is a village of about twenty Kurd houses, and a larger one, bearing the name Ghyuljik, of fifty Raya or Christian houses. There are also some eight or ten houses on the northern side; there is a village about six miles to the west, and Kizzin is about a mile and a half on the east. The lake is surronded by high hills which come down into its waters, but there is a small open space on the Kizzin side. These hills have a green appearance when seen close, but at a distance look sufficiently barren to make the blue waters of the lake a charming contrast.

The temperature of the water was found to be 68°, the air being 80°. I brought away a flask of the water for analysis, and the following is the result arrived at by Mr. Squire, the London chemist:—"Remarkably soft, being almost entirely free from lime and magnesia salts. Its hardness may be described as being only one-third that of Thames water. A gallon of water contained ninety two grains of solid matter, which

consists almost entirely of chloride of sodium. The water also contains a certain amount of organic matter." The assurance that the waters of this lake were salt, and my own uncertainty on the subject from taste, caused me to put the question to proof. Its miniature waves and blue appearance rather favour the belief of the peasantry. The Kurdish village is at the widest part of Ghyuljik, and is prettily situated in a small bay among trees. A boat is kept by the Rayas, attached to whose village was once a monastery, long ago cut off by the waters. The building is now seen in its isolated position at a considerable distance from the opposite high land. The telegraph line runs, with its usual unromantic determination, close by the eastern head of the lake.

38. I had come down from the high tablelands of Kharput into the valley of the Upper Euphrates, meeting the river at the ruined caravanserai of Sultan Murad, and had not moved far along the left bank when the chaosh or Turkish telegraph official who accompanied me called my attention to a cuneiform inscription on the perpendicular face of a rock almost in our track. It was in proportion much as follows, and I would commend it to the notice of those more capable than myself to decipher its meaning:—



The rock is not a high one, and the stone on which is the inscription falls in to some extent, so as to be framed by the outer portion of the rock. No doubt this has already been noticed by travellers, but I have hitherto been unable to ascertain the fact. The letters are arrow-shaped, but have a look of Sanscrit in their lining and indistinctness. The large village of Izz Oghlu, on either side of the Euphrates, is about five miles further up than the locality of this inscription.

I have the honour to be, &c.

F. J. GOLDSMID, Lieut. Colonel,
On special duty.

Memorandum of Marches from Bagdad to Angureh.

1	Jedideh	19th May.	21 miles.		Large village.
2	Yenijeh	20th „	15	„	Village.
3	Dizhdari	21st „	24	„	Arab tents; village.
4	Rametat	22nd „	10	„	Arab tents; no village; plains.
5	Kara Teppeh ..	23rd „	23	„	Large village.
6*	Kifri	24th „	17	„	Turkish town.
7	Bayat	25th „	19	„	Arab tents.
8	Zind	26th „	20	„	Kurd tents.
9	Taza Khurmati .	27th „	22	„	Large village; 300 houses.
10	Kerkuk	28th „	14	„	Turkish town; 2,500 houses, 10,000, inhabitants.
11	Yurimja	30th „	16	„	Kurdish tents.
12	Girdashina	31st „	19	„	Ditto.
13	Kerimlik	1st June.	24	„	Ditto.
14	Zab Su	2nd „	20	„	Ditto, both banks.
15	Shah Kully	3rd „	19	„	Village.
16	Mosul	4th „	16	„	City.
17*	Tel Keif	7th „	10	„	Chaldean village.
18	Fayida.....	8th „	20	„	Village.
19	Girk Osman ..	9th „	21	„	Kurd village.

20	Karola	10th June	22	miles.	Kurd tents; right bank of Khabur.
21	Jezireh	11th „	20	„	Large town, formerly of importance.
22	Azukh	13th „	18	„	Syrian village.
23*	Ba Sabirin	14th „	16	„	Ditto with old monastery.
24*	Middiat	15th „	21	„	Ditto.
25*	Kherbat Tao ..	16th „	18	„	Small village.
26	Mardin	17th „	21	„	Large town; population 22,000, half Christian.
27	Sheikhana	19th „	15	„	Two or three tents.
28	Ak Punwar ..	20th „	27	„	Small village.
29	Diarbekir	21st „	18	„	Large town.
30*	Dimika	23rd „	20	„	Kurd tents.
31	Argana	24th „	15	„	Large village.
32*	Topal Usak....	25th „	19	„	Small village in the mountains.
33*	Kizzin	26th „	14	„	Village near Lake Ghyuljik
34	Kharput	27th „	21	„	Large town of Turks, Armenians, &c.
35	Khan Kui	1st July	10	„	Small village.
36*	Izz Oghlu	2nd „	22	„	Large Kurd village on either side the Euphrates.
37	Burana	3rd „	17	„	Small village.
38	Hassun Badrick.	4th „	16	„	Large village, Kizzilbash.
39	Hakim Khan ..	5th „	18	„	Ditto.
40	Hassan Chelibi.	6th „	14	„	Large village, Kizzilbash.
41*	Allaja Khan ..	7th „	20	„	Village of 60 houses.
42	Kangul	8th „	15	„	Ditto.
43	Delikli Tash....	9th „	12	„	Ditto 40 or 60.
44	Ulach	10th „	12	„	Ditto of 60 houses, many Armenian.
45	Sivas	11th „	20	„	Large town; 10,000 houses.
46	Munteshir	16th „	21	„	Small village.
47	Kawak	18th „	15	„	Large ditto.
48	Ekkejik	19th „	16	„	Small ditto.
49	Mashallum Kilisi	20th „	20	„	Large ditto.

50	Kara Maghara	21st July	18	miles.	Small village.
51	Kohineh, or Kuvneh.	22nd „	18	„	Ditto; hot springs.
52	Yuzgat	23rd „	18	„	Large town; 5,000 houses.
53	Gootlek	25th „	18	„	Small village.
54	Israel-li	26th „	21	„	Turcoman village.
55	Bey Obahsi ..	27th „	23	„	Ditto.
56	Yekhshi Khan .	28th „	16	„	Ditto on Kizzil Irmak.
57	Hassan Oghlan.	29th „	19	„	Ditto.
58	Angureh	30th „	20	„	Large town.

Total miles .. 1,054

F. J. GOLDSMID, Lieut. Colonel,
On special duty.

Distances of places marked* revised as follows :—

18	in lieu of	17	
11	„	10	
18	„	16	
22	„	21	
20	„	18	
21	„	20	
20	„	19	
15	„	14	
23	„	22	
21	„	20	12

Total miles .. 1,066

[*Bombay*] INDO-EUROPEAN TELEGRAPH DEPARTMENT.

No. 28 OF 1864.

From Lieut. Colonel F. J. GOLDSMID,
On special duty,

To Lieut. Colonel P. STEWART, R.E., *C.B.*,
&c. &c. &c.

Dated Pera, 30*th August* 1864.

SIR,—With reference to Bombay Government telegram received at Fâo on the 3rd May last, and a memorandum from yourself which reached me through Mr. Kersting on or about the 14th idem at Bagdad, the first authorising me to proceed to inspect the Telegraph line from Bagdad to Scutari, and the second setting forth the chief points requiring attention on such tour of inspection, I have now the honour to forward—

I. Memorandum of changes which appear requisite for the better security and general improvement of the line of Telegraph, accompanied by a rough Diary from Jezireh to Izmid.

II. A similar document* (though much modified in translation), without accompaniment, but with a summary of changes proposed, for submission, if requisite, to the Ottoman authorities.

* In French.

III. Copy of correspondence with Colonel Kemball, C.B., Her Britannic Majesty's Consul General at Bagdad.

IV. Memorandum of stages from Bagdad to Izmid.

2. Upon the whole I am of opinion that the condition of the line, though not quite satisfactory in detail, promises

good results if only a sufficient number of qualified inspectors be appointed, attention given to remedy the defective insulation, and the changes specified admitted to have effect. I would particularly urge the transfer of the Mosul station to the left bank of the Tigris, owing to the constant dangers to which the line is exposed by a really needless river crossing and recrossing, with the mere view of reaching the town at a few hundred yards' distance. This precarious condition has been verified by experience.

3. I have indicated three natural divisions of the whole route. For each of these it occurs to me that two inspectors would not be excessive; yet if such arrangement should prove more costly than contemplated, it would perhaps answer the same purpose to appoint one first class inspector to each division only, and a second class inspector to relieve him of a portion of his work. This classification, by reducing the pay of the inferior grade, need not affect the character of the employé if promotion to the higher rate be considered the rule, variable only for inefficiency or misconduct.

Condition of Line.

4. The points noted in your memorandum will now be replied to seriatim.

The state of the line has been observed generally, and with especial reference to Colonel Kemball's reports. Reference to the diary will show that it has been habitual to consider these at each particular spot where an objection had been placed on record. From day to day the main object has been to sift the causes of interruption to the line. They are noted, so far as ascertained, in the accompanying papers. My general impression has been, as stated in letter to Colonel Kemball, that "more accidents occur in the low ground near rivers, extended gradual slopes, or in marshes, than on high ground and in mountainous country."

Posts.

5. Many of the posts are very weak and insufficient to the work. The poplars, if not severely tried by soil or weather or unlooked-for accidents, may last for four years. I should think that an average of five years might be fairly given if renewal by cutting be allowed for. It is satisfactory to find that as a rule the chaoshes devote much attention to this part of their duty. They are constantly trying the strength of their posts, with a view to removal where necessary. In no instance have I found that those which had been broken in storms had been moved from their position underground; all had been broken at the surface. Mounds of earth or stone, according to circumstances, are very generally used.

Stays are seen occasionally, and chiefly at the passage of a river. It has been suggested that they be more freely applied.

6. But to ensure the fair average duration of the post the selection of poplars must be made not alone with reference to size but quality. The circumference of those actually in use may vary from 11 to 48 inches; but it is not always that the larger poles are the stronger. I have seen and pointed out to the chaoshes thin ones, and have been assured that many such are equal to any on the line in real solidity.

7. From Bagdad to the khan 3½ hours north of Hassan Çhelibi, a distance of about 750 miles, there is very little to vary the one line of poplars. A few fir poles observed in the neighbourhood of Mosul are much prized by the chaoshes, who declare they have stood firm from the first, and give them no trouble or concern. Mr. Rassam was of opinion that available fir poles could not readily be obtained at Mosul to any extent. There was a forest at no great distance, in Kurdistan, but the trees were unsuited to the purpose required.

From the abovenamed khan to Geiveh, 480 miles, fir poles the rule, and from Geiveh to Izmid the wood is oak.

8. There are few places where poplars are used for the line to which they cannot be brought without material cost or difficulty. Rivers convey them to the lower country from Kurdistan, Sawur, &c., and they are found at Diarbekir, and near Kharput, Prechuch, &c.

To the country between Jezireh and Mardin they may be brought from Nisibin, to the south, as well as from the Kurd forests eastward. I should say that from Kinmur Khan, on the Euphrates, to the Kizzil Irmak at Sivas, or in the passage from Upper Mesopotamia to the plateaux of Asia Minor, their transport was the most inconvenient. Between Mardin and Diarbekir I saw some very fine poles which they told me had been procured near the village of Khanik Ashada on the post road. I have heard the cost of poplar poles estimated as low as twelve and as high as sixty-five piastres. A medium might represent the average, say forty piastres. This is the exact amount which I was informed that they cost at Diarbekir.

9. 'Firs are abundant where used on the line, and in some places are procurable for the mere cost of labour. It will be seen that I have supposed in one instance sixpence a piece, but this involves a concession of forest products on the part of the sovereign in favour of the Telegraph Department, and cannot be taken as a figure for general purchasers.' 'As a rule these poles appear to me excellent, but there are many exceptions. The oak forests are too near Constantinople to call for any further remark than that the wood is, I believe, abundant. Many posts, however, are weak, and require change in the neighbourhood of Izmid and Scutari.

Direction of Line.

10. I would request the favour of reference to my diary to answer the question on the changes of direction proposed by

Colonel Kemball, with whom I have directly communicated by letter on the subject, as regards the country between Bagdad and Jezireh. Not having followed the post road from Jezireh to Mardin, or visted that across the Mehrab Dagh, I have been unable to furnish the actual difference of distance between them and the present course of the line.

These are really the more important of the changes under discussion; but the first would no doubt involve much labour and expense, more perhaps than the Turkish government would be disposed to accord, and the second was not contemplated by Colonel Kemball himself so long as there was greater security in the upper and more difficult road. The changes, entered in the French memorandum, involve only a distance which might be measured by yards. That proposed between the Zab Su and Khazir Su would, if carried out, be rather a saving than additional expenditure of material. It was in vain to attempt upon any of these proposals without obtaining sanction from head-quarters. No immediate action was therefore taken in the matter, but the present opportunity was awaited, and in the meanwhile we contented ourselves with correcting details whose comparative insignificance ensured a ready compliance with our wishes, *i. e.* slackness of wire, fall of insulators, removal or addition of a superfluous or wanting post, &c.

The computation is from Bagdad to Izmid.

11. For a distance of 1276 miles there are 107 chaoshes, or one for every twelve miles. On a rough estimate I should say that three-fourths of the number are active, intelligent men, and well fitted to their work. There are twelve bash chaoshes, to whom the same remark will apply. The mudirs of stations and their assistants appear to me rather manipulators than acquainted with the theory of telegraphy. But while ignorant

Local Officials.

of cause and effect in the practical working of their profession, where doubtless knowledge would be of immense service, they are not generally wanting in intelligence, and many of them would, I am convinced, be most promising pupils if put under a course of scientific study. In these matters, however, I must speak with diffidence as my own experience is almost *nil*, and refer to the better grounded opinions of Mr. Kersting.

Insulation, soldering joints, &c.

12. The insulation is at present very defective, but almost wholly for the second or lower wire, where the insulators are with few exceptions porcelain. On this and other matters of general application I wrote as follows to Colonel Kemball, and I might have written in much the same strain from Izmid as I did from Kharput:—"It does not appear that any material change has been made in the line since the period of your visit in respect to general condition. Not one joint have we found soldered up to Kharput; half a dozen whole porcelain insulators in succession is an exception to the rule; and supplies of necessaries are not always attended to, whether it be in the matter of extra insulators with chaoshes, or the more important one of elements for a battery, as at Jezireh. On the other hand Mr. Kersting remarks that although straining insulators are too few, and ordinary insulators made to serve the purpose with small binding-wire, yet the general distribution and application of the straining insulator appears judicious. As formerly remarked, there was not a single straining insulator between Mansurieh (Mardin) and Shekerli (near Diarbekir)."

13. Colonel Kemball kindly placed his diaries at my disposal before quitting Bagdad, allowing me to copy or extract from them *ad libitum*. These papers were invaluable to me in every respect. The minuteness of detail with which I found the reality to correspond with the record enabled

me almost to anticipate the results of my own inspection; and it was often a matter of wonder to the accompanying chaoshes how, without having before visited the country, I was in possession of so many minor details of yet unaccomplished stages. Should my opinion on any proposed changes be found to differ from those expressed by Colonel Kemball, I would request particular attention to the fact that my inspection was performed at a most favourable season, that of my predecessor for a great part during a severe winter, and under many consequent difficulties. Nor should it be forgotten that I have had the great advantage of data based upon a three or four-years' experience of the line, which was in its infancy on the occasion of prior inspection.

14. The same officer obtained for me, moreover, the aid of an Egyptian engineer, deputed by His Excellency Namik Pacha to accompany me to the limit of his jurisdiction. Ahmed Effendi, jointly with myself, took notes of the difficulties encountered, and proposed amendments, returning to Bagdad with the recorded result of his observations. I addressed a second report on the subject to Colonel Kemball, accompanied by a memorandum of route traversed, but have retained no copy. It is probable that action has already been taken on these reports, of which the substance is contained in the enclosed notes on the first section of country. Under any circumstances, I have to express my acknowledgments of the service rendered by Ahmed Effendi during our companionship of more than three weeks, and should be glad to send him some small token of appreciation.

15. Mr. Kersting was always ready to assist me with his valuable professional knowledge, and has favoured me with memoranda of the result of his observations between Bagdad and Izmid. These are appended to the diary. We left Bagdad on the 19th May and reached Angureh on the 30th July, our marches, exclusive of halts, averaging more

than 18 miles per diem, inclusive of them 14½ miles. From Angurch, in accordance with your wishes communicated by telegram, I posted on to Izmid, and joined you at Constantinople on the 4th instant. Mr. Kersting completed the tour of inspection to Izmid by the usual marches, reaching Constantinople on the 14th. His remarks are appended to the general diary, and coincide for the most part with my own more hurried observations both of stages and stations in the particular tract traversed.

16. Our three horses, purchased at Bagdad for 468 kerans (about £23½), carried us the whole way without casualty, and have been brought into Pera. They will be sold, and the amount realised deducted from the total of contingent bill charged to the State and forwarded some days ago. I should explain that in the charges made for mules from Mosul to Jezireh are included two for Ahmed Effendi, the engineer who accompanied us. The circumstances of the case seemed to warrant this trifling outlay, and we considered it right to make him our guest during the time we were companions in travel.

17. In conclusion I cannot speak too strongly of the great courtesy evinced towards us by the higher authorities with whom we chanced to come in contact. I made it a duty to call on the pachas at Mosul, Diarbekir, Sivas, and Angurch, also on the Kaim Makam at Yuzgat, who had placed quarters at our disposal, and we met with a cordial reception from all. The pacha of Sivas, in addition to the despatch of a cavalcade to escort us into the town, and other civilities, relieved us of the difficulty experienced in cashing a bill on Constantinople by sending us the full amount from his own purse. The pacha of Angurch not only provided us with an escort, an excellent house, board, and attendance, but did us the honour of a friendly visit in person. The mudir and telegraph officials, from highest to lowest, were

attentive to our wants and requirements to a degree wholly unexpected. And as for the inhabitants—allowing of course for lights and shades of individual character—I cannot sufficiently recall a single circumstance to mar the pleasing recollection of our trip acquaintance with those under whose roofs, tents, or protection we lodged, whether Turk, Syrian, Chaldean, Armenian, Arab, Kurd, Turcoman, or Kizzilbash.

I have the honour to be, &c.

F. J. GOLDSMID, Lieut. Colonel,
On special duty.

MEMORANDUM.

The route from Bagdad to Constantinople may be divided into three heads:—

I. *Gagdad* to *Jezireh*, about 400 miles, East of Tigris Section.

II. *Jezireh* to *Sivas*, about 430 miles, Upper Mesopotamia and West of Euphrates Section.

III. *Sivas* to *Scutari*, about 500 miles, Asia Minor Section.

I.—*Section east of Tigris.*

The lowlands throughout a great portion of this distance are subject to overflow, and in parts it has been found that from this reason stoppage to the line has been occasioned for several days together during the current year. This is especially the case in the country near Bagdad. To the northward of this city the Tigris makes a comparatively direct descent of about sixty miles, and to the east of this river is the Dyala, the space between the two varying from five, ten, to thirty miles. Again from the Dyala runs the Khalis, and it is across a tract affected by these waters that the line of

telegraph has to find its way to the range of hills known as the Hamrin. Even at the late time of year during which we traversed these parts many of the posts were deep in the water, numbers had fallen and been set up again; in one place the damage could not be repaired sufficiently to restore due working of the line for twenty days. On this subject I addressed Colonel Kemball as follows:—"There is no immediate danger of a repetiton of casualty, but a permanent remedy is suggested from one of three modes, viz:—'

I. To erect posts with masonry piers.
II. To substitute iron for wood.
III. To change direction of line.

"The *first plan* may be as expensive as any, but I believe it to be the most suitable. Both labour and expense might be saved by enlarging the present spans of wire and decreasing the number of poles. The land subject to overflow is of great extent, and the water has risen to the height of several feet. When we passed it had much subsided, and there was no material depth, only considerable spread of water.

"As regards *the second plan* Colonel Stewart states that iron poles can be delivered at Bagdad at an average cost of thirty-five shillings each (of which twelve shillings would be freight from England); it is probable that at least a hundred would be necessary between Jedideh and Kashkeh if their adoption were approved.

"The *third plan* I have no sufficient data to recommend, nor do I see that it would necessarily provide against mishaps such as have occurred this year, however desirable in other respects. At Dizhdari the distance of the road from the telegraph line should be at its greatest, say 3½ miles; and this place is certainly not free from floods. A tract between two rivers like the Dyala and the Tigris, and intersected by the

Khalis, where its whole breadth is but limited, and it is unprotected by solid embankments, would appear to need special security for its line of telegraph posts, wherever chosen. The dryest and highest ground appeared to me to be on the left of the present line, or on the hillocks west of Mahomed Ibn Ali."

The passage of the Hamrin hills should be secure enough under competent inspection. Ahmed Effendi, the engineer who accompanied me from Bagdad, has proposed a few modifications in detail, into which it appears unimportant to enter. The great desideratum is in my opinion a more frequent use of stays at certain points. From the Hamrin up to Kerkuk, an extent of more than a hundred miles, there are several wide river-beds, for the greater part of the year either dry or containing insignificant channels, but liable to overflow at certain seasons. Strong masonry piers would here be of great use. I select two instances from others which have been reported on by myself to Colonel Kemball, or in the vernacular by Ahmed Effendi for the information of his Excellency Namik Pacha. This officer, it should be remarked, took back from Jezireh with him a detailed statement of suggested improvements, with cost estimated.

I. The large *Chai* at *Tuz Khumati* requires attention: where the line crosses it the division is into two distinct wide beds, with high ground between. The first of these is from 300 to 350 yards in breadth, and has six poles in its bed, with a water-channel between the second and third and fifth and sixth, also one more central. There are about thirteen poles in the second Chai. All the poles in the two Chais should, I think, have stone piers, but their number might be reduced by two-thirds. Some two hours further there is another large Chai, crossed by the line at Dolanker, having nine poles, of which Nos. 4 to 9 were found in the water. Here also a like

precaution might be necessary, and it is the more readily recommended as large building stones are procurable in the vicinity.

II.—At *Took Chai* one week's stoppage on the line is said to have occurred last year. The right bank of this river is perpendicular, and may be 60 feet in height; the span across the stream to liquorice fields below from 180 to 200 yards: deep watch, and heavy gravelly bottom. From hence to the post on the left bank of another division of this Chai, which we had first crossed, there are seventeen posts intervening. Distance 1,200 to 1,500 yards in all, liquorice crops inclusive. Stays are judiciously used for the posts on the river bank, but I think the stone pier might be added for greater security. This is called a Kura Chai or dry river.

The "Chardakhla" or Kerkuk Chai, though broad, scarcely merits special notice. From hence the line runs through grain-fields nearly the whole way to *Kerkuk* over an undulating country. Up to the Zab Su, nearly eighty miles beyond Kerkuk, I see no material difficulty. There are some rocky hills to be crossed, and the Kujpir Su and Altmo Kiupri river, but there are also lower fields covered with grain, and an easy undulating country. Over the *Zab Su* the wire is carried by means of two central poles in the river's bed, built about three years ago into stone piers, at the cost of 10,000 piastres; one of these has been undermined by the water and thrown over to one side. The whole affair has been badly constructed, and should be looked to with a view to future security. If one span be attempted it should be done with masonry pillars on either bank. The waters here come down with great violence on the melting of the snow in the neighbourhood of Ruhandis and Akra in Kurdistan. A little beyond the Zab Su is the Khazir Su, a small strong stream but of no great width. It joins the Zab at about nine miles below the telegraph crossing, both flowing into the

Tigris at eighteen miles lower still. About twenty-four miles from the Khazir is the town of Mosul, to reach which the Tigris must be crossed either by bridge or boat.

Colonel Kemball remarked upon the unnecessary détour taken by the line after crossing the Zab Su, and considered that it should be removed to the post road, at present at some considerable distance.

I should suggest that this particular point meet with attention at an early period. The direct course of the line, irrespective of the road, is quite intelligible as it approaches Mosul; it is clear that the object aimed at is economy, and to avoid a needless outlay; but the deviation near the Zab seems to me to cause a greater demand for posts and wire than would have been required by adherence to the simple plan of following the road.

The passage of the Tigris at Mosul is another and far more serious matter. At present the line passes to the right of Nubbi Yunas on left bank, and over low inundated land to the bank of the river, then takes advantage of the unfinished arches of a bridge under construction to reach the old bridge in the middle of the stream. From the old bridge to the right bank of the Tigris, on which is situated the town of Mosul, is a broad, rapid stream, crossed, when circumstances admit, by a bridge-of-boats, but impassable except by boat at the period of our arrival. Over this the line is brought by a span of tolerable extent. It appears that there has long been an old stone bridge at Mosul communicating with the town by an intermediate bridge-of-boats, but that owing to a great rush of waters on the opposite side it has been found necessary to build a new stone bridge, or section of a bridge, to connect the old one with the left bank of the

Two posts on old bridge, two on new. Span from the former to Mosul Fort, when line turns at a right angle to Telegraph Office.

river. This is in the hands of an Egyptian engineer, who has hitherto been unsuccessful in accomplishing his purpose, and whose work had been wholly stopped, after no small amount of damage, by the rise of the waters. Taking into consideration the state of the wires at the crossing when we first arrived at Mosul, the fact that only three out of four had been got to work up to the day of our departure, the long and frequent delays that have been occasioned (especially this year) by the accidents in this particular spot, and above all the little necessity existing for taking the line across the Tigris at all, I strongly recommend that the station be built at some point between Nubbi Yunas and the river, and as near the latter as convenient. If on the actual bank, and the bridge were available, a messenger might reach the town of Mosul in five or ten minutes, and he need be but little longer by boat. *This arrangement would keep the telegraph line from Bagdad to Jezireh on the east bank of the Tigris.*

Nubbi Yunas itself is high, and would be an excellent spot but that it is a mile or so from the river.

From Mosul to Jezireh, more than ninety and less than a hundred miles, the line needs careful inspection, and to do the work well and efficiently on the east of the Tigris there should at least be two inspectors. Up to the valley of the Khabur the country is undulating or hilly; much is under cultivation, much, again, is stony and difficult of access. The first day's march we found No. 2 wire lifted out of a broken porcelain insulator and over to the other side of the pole. The second we passed some six or seven fallen posts all broken off level with surface of the ground. The day following we saw seven in the same condition. I am of opinion that the line is very awkwardly constructed in effecting the passage of the Khabur. It zigzags off to avoid a steep descent N.N.E. to N.E., and turns towards the stream at

a sharp, sudden angle. As usual in these rivers after the waters have subsided, there are two crossings to be achieved, one, say, of 150 to 180 yards, the other about half the extent, the intervening strip of ground making the whole distance up to 250 or 300. There were in all five posts, three of which were in the centre exposed bed. One of these last, the immediate support towards the left bank, had fallen and been renewed this year; no stays used, but straining insulators. Masonry pillars, or at the least posts built into piers, are here urgently required. My opinion at the time of inspection was in favour of the last. They told me that the water would rise to a height of 3½ feet in the centre (then dry) at the fullest or most critical time. I make the span at most 75 + 150 for the two streams, and 75 the intervening space = 300.

From the Khabur to Jezireh, on the right bank, is about twenty miles. The line crosses hills, marshy land covered with wild grasses, grain-fields, undulating country, and follows the river. After a time both telegraph and road leave the bank, and strike off in a direct course towards Jezireh over steep stony hills, the telegraph line making a descent into low grassy ground for some distance before crossing the Tigris, the road keeping at a higher point till it reaches the ferry.

I have little to add as regards the crossing of the Tigris at Jezireh to the details noted by Ahmed Effendi. If the town of Mosul were thrown out of the line, as recommended, and the crossings of this river thus reduced to this single one from Bagdad upwards, a little extra expense to make the passage at Jezireh thoroughly safe and effectual might be thought worthy of consideration, even to the erection of masonry pillars on either bank. Colonel Kemball estimates the span at 180 yards, but uncertain inundation to no small extent, affecting the security of the posts near the bank.

Mr. Kersting's reports on the three stations of Kerkuk, Mosul, and Jezireh are transcribed and appended. It should be remembered that there was a want of zinc at the last named, and that at none of the stations was there an available spare instrument. At Mosul the instruments were not clean, and a like remark applies to the binding screws and wires connected with the elements of batteries. There was no mudir at Jezireh, and the assistant in charge was in bad health. The station is unfortunately by position important, and bears traces of former distinction, but nothing can be less inviting than its appearance—deep in the valley of the Tigris, and surrounded by high steep hills.

The climate is reckoned feverish and sickly. Its unpopularity is not surprising.

SECTION II.—*From* JEZIREH *to* SIVAS, *or Section of* UPPER MESOPOTAMIA, *and West of the Euphrates.*

Copies, or in some cases extracts, of diaries being added for the whole country from Jezireh to Sivas, reference will be made only to the principal points mooted in these papers.

From Jezireh to Mardin, thirty-two hours, the country, after rising from the valley of the Tigris, presents a rugged aspect, and is deeply and frequently furrowed by steep difficult "Sakláns." This word may be translated as galleys or defiles, whose occasional slopes and low cultivated beds give them something of the character of a dale or valley. Many ascents and descents are thickly covered with stunted but leafy trees; some clusters are found at the bottom only, and often beside a hill stream. The line is generally well brought through these difficulties with judgment, although a minute survey might be suggestive of an occasional change of direction. In Colonel Kemball's opinion a few miles in the neighbourhood of *Middo* and Balaberives, and the hour

before reaching the foot of the Mardin Hill, are the localities chiefly requiring revision. These observations were the result of a winter visit. We passed under far different circumstances in the month of June—a most favourable season for close inspection.

The experiences of the last three years does not make the "Sakláns" so dreaded at Middo by the chaoshs as the heavy mud between Middo and Azokh, which is said to be bad enough in the winter to render ordinary work almost impracticable. At Ba Sabirin the country is very rough and difficult, but I hear of no accident to establish the fact that the objections on this score are important. Personal observation would lead me to recommend, for purposes of daily inspections in these parts, the use of mules in preference to horses.

For Mardin I would certainly recommend attention to Colonel Kemball's suggestion to remove the station from the town to the village below the mountain, and in such case the direction of the line would be connected from its present objectionable windings and turnings. A detailed notice of the change proposed will be found in the diary. The passages of the wires through the irregular streets of Mardin is clumsy and unsightly to a degree.

From Mardin to Diarbekir, twenty hours, any changes in the first portion, or from the foot of the Mardin mountain, must depend on the transfer, or otherwise, of the station to the plains. If so transferred, however, I should suggest that the present general direction is appropriate, and should be maintained. If the station remain as at present, I think it merits consideration whether the Diarbekir line, instead of availing itself of the Jezireh poles, should not run out at the western side of the mountain and up the Post Road?

There should be strong and duly-stayed posts on either side of the Gok Su, which, it strikes me, needs no intermediate poles in its bed.

The late transfer of the line near Diarbekir, from a double crossing of the Tigris, as the shorter route, to keeping wholly to the right bank on which Diarbekir itself is situated, is an excellent arrangement, and in accordance with Colonel Kemball's recorded opinion. But I would suggest that the four straining insulator posts taken from the Tigris crossings be applied to better purpose than at present (one or two perhaps at the Gok Su), as they are the only straining insulators used between Mardin and Diarbekir.

Attention should be given to the mode of carrying the wires through the town of Diarbekir, which might be improved in detail.

From Diarbekir to Kharput, twenty-nine hours, the great question is whether the line should be carried over the Mehrab Dagh or Post Road, or keep its present direction to the westward over the Batman Mountains? The point is discussed in the diary in detail. In the meantime it is recommended that if not iron posts, at least very strong wooden poles be selected for the low country between Dimika and Argana, where a serious accident occurred this year.

From Kharput to Sivas, fifty-eight hours, the line returns to the southward again, until it reaches the left bank of the Euphrates. Following this nearly due west for some miles, and crossing it above Izz Oghlu, a village situated on both banks, it returns to its former northerly course. Passing the plains of Matatich, and running within a few miles of that town, it enters the mountainous country beyond, emerging on the great Asia Minor plateau at Sivas.

I would suggest correction of the line at the following points:—

I. In proceeding from Hassun Badrick to Hakim Khan there is a point at which the line makes a grand diversion from the road. From hence, for about five miles, I am of opinion that a transfer to the road, or near the road, would be a measure likely to facilitate the labour of the chaoshs, as well as one of necessary precaution.

II. A similar remark applies to the country at one hour beyond Allaja Khan for some five or six miles; and I think it would be better were the line from Ulach to Sivas, generally, brought nearer to the Post Road.

There are four rivers in this section—

1*st.*—The Kimnur Su, on left bank of Euphrates.

2*nd.*—The Euphrates itself.

3*rd.*—The Sultan or Tochma Su on right bank.

4*th.*—The Kizzil Irmak at Sivas.

The arrangements hitherto made for spanning these appear to have been effectual. Should they be found otherwise, I should suggest attention to Colonel Kemball's proposal to erect masonry pillars, especially across the Euphrates. Under any circumstances a spare wire appears a precaution worthy of adoption at every river crossing.

The distance, as the crow flies, between Diarbekir and Matatich—to which place the line now so closely approaches—compared to the circuit viâ Kharbut has called for notice in the diary.

Mr. Kersting's remarks on the stations of Mardin, Diarbekir, Masara (Kharput), and Sivas are attached to the papers accompanying. Attention will doubtless be given

to the imperfect manner in which the gutta-percha-covered wire is joined on to the line wire outside the office windows. A fifth instrument is urgently required at Sivas for the Erzerum and Frebizurc line.

SECTION III.—*From* SIVAS *to* SCUTARI; *or Section of* ASIA MINOR.

A diary as far as Izmid is annexed.

From Sivas to Yusgat, forty-two hours, no change in the line appears to me absolutely urgent or requisite. I think it would have been better to have avoided, if possible, the zigzag which has lengthened it by several miles from a more direct course, nor did I feel satisfied that every such variation of the points of the compass was imperative. But the line seems upon the whole sufficiently secure. One or two abrupt turns might be avoided with advantage, especially at about an hour from Kuvneh, where the posts might be redressed and strengthened at the angle formed by the change from W.N.W. to W. For the last hour, or more too, on the same side of Kuvneh the wires are too slack.

From Yuzgat to Angureh, thirty-nine hours, there is no part of the line which appears to me so much to require alteration as the passage along the streets of Yuzgat, than which nothing can well be more clumsy and ill-contrived. Broken and ill-supported insulators are not all the defects which injure communication; the whole thing is an eyesore. I should strongly recommend attention to one of two changes:—

1*st.*—To bring the line out of the town by a more direct course than that now taken.

2*nd.*—To raise the line from its present low position among the narrow, irregular streets, and secure it by lofty and strong poles, where no better support is accidentally

afforded than an old wall, or other part of an insecure house, shed, or building of any kind.

The exit from Yuzgat is a very difficult one, but I am not prepared to suggest a better. The country is naturally rough and mountainous and needs survey. A regular course of inspection will probably result in revision of this portion of the line, as suggested by Colonel Kemball. In the meanwhile it appears tolerably free from accidents and interruptions.

The first stage from Yuzgat to Gootluk is of 5½ hours. After this and between Gootluk and the Kizzil Ismak twenty hours. Colonel Kemball was of opinion that certain portions of the line needed revision as being at too great distance from the road. Bearing in mind, however, what the Angna road really is, I do not think that the experience of the last three years would warrant a recommendation to transfer it thither. Regular inspection would decide the matter very shortly.

I have nothing to add on the second crossing of the Kizzil Ismak to what has been said regarding the four rivers of the last section. The chaosh who has to cross the Kizzil Ismak in his tour of inspection would perform his work more effectually if the river were to mark the termination of his beat. This unnecessary flaw in detail existed 3½ years ago, and was noticed by Colonel Kemball.

Mr. Kersting gives a favourable report on the stations visited in this section. He has remarked on a want of neatness in bringing the line wires to the instruments at Yuzgat. An extra instrument is required here also for the recently erected line from Samsun.

From Augneh I posted to Izmid, seventy hours, but was able to visit the two telegraph stations and take a general note of the line. The result of Mr. Kersting's more

minute inspection is, however, recorded in a diary attached to my own. It will be seen that the main points are discussed in the accompanying Memorandum prepared in the French language for the Director General of Ottoman Telegraphs.

Before reaching Muderler the face of the country had quite changed. In lieu of bare, bleak hills or stunted vegetation, we entered magnificent forests; and these continued more or less to the Lake Sabanjeh near Izmid. About Jerivh the fir is succeeded by oak. Both supply posts to the line.

F. J. GOLDSMID, Lieut. Colonel,
On special duty.

Pera, 30*th August* 1864.

Propositions contenues dans le mémoire ci-joint.

I. De construire des fondations en pierre pour certains poteaux dans les terres basses et inondées entre Bagdad et les montagnes du Hamrin, selon les détails rendus à Son Excellence Namik Pacha.

II. De construire les mêmes pour la traversée des Tchais entre le Hamrin et Kerkuk, selon les susdits détails.

III. De reconstruire les mêmes pour la traversée du 'Zab Su; in d'y bâtir des colonnes en pierre, une de chaque côté de la rivière, sans poteaux intermédiaires.

IV. De transférer la station de Mosul à la rive gauche du Tigre, où passe la ligne télégraphique.

V. D'arranger pour la traversée du Khabur comme proposé pour le 'Zab Su.

VI. De transférer aux plaines la station de Mardin.

VII. De faire traverser le Gok Su sans poteaux dans le lit du torrent.

VIII. D'améliorer la position de quelques isolateurs dans la ville de Diarbékir.

IX. De prévenir la chûte des poteaux dans les terres près d'Argana en y mettant le bois le plus fort.

X. De changer un peu la direction de la ligne entre Hassim Bâdrik et Hakim Khan.

XI. De même entre Allaja Khan et Kungal.

XII. De même entre Ulach et Sivas.

XIII. De même entre Kara Maghara et Kuvnéh.

XIV. D'améliorer la traversée de la ligne dans la ville d'Yuzgat en sortant sur la route d'Angoreh.

XV. De changer un peu la direction de la ligne entre Ayach et Beibazar, et de fortifier quelques poteaux de soutiens en fil de fer.

XVI. D'empêcher que les branches et les feuilles des arbres touchent le fil entre Muderli et Cherkéss ; aussi de bien examiner les poteaux entre Muderli et Izmid, plusieurs d'entre eux étant faibles ou pourris.

I., II., III., V., VII.

Les trois premières de ces propositions, ainsi que la cinquième et la septième, peuvent servir comme exemples ; mais à cet égard la règle est tout simple :—" Dans les terres inondées on doit avoir des poteaux soutenus par les fondations en pierre de la plus grande hauteur de l'eau. Ce système applique aussi aux élévations de terrain sablonneuse ou pierreuse qu'on trouve si souvent au milieu de quelques Tchais. Mais, où la traversée d'une rivière peut se faire directement, et sans poteaux intermédiaires, il vaudrait mieux construire les colonnes de pierre.

X. jusqu' à XIII., ainsi que la quinzième proposition, traitent de petits changements de ligne qui me paraissent faciles et utiles.

X., XI., XII., XIII., XV.

Les propositions huit et quatorze peuvent se resoudre dans une proposition générale de faire attention au passage des lignes télégraphiques dans les grandes villes, comme Mardin, Yuzgat, Sivas, et Diarbékir, où les fils se perdent dans les rues, parceque la Station n'a pas été choisie à un endroit convenable, comme à Angoreh.

VIII., XIV.

La neuvième et la seizième propositions discutent de petits détails dont la disposition est simple. Je dois, cependant, observer que les chûtes des poteaux à cause de vent ou des tempêtes, et parceque le bois manquait de la force nécessaire, ne se bornent pas à la seule localité d'Argana. J'indiquerai aussi les endroits suivants :—

IX., XVI.

Entre Kherbâ Tâo et Reshmil on m'a montré un endroit dans un pays ondoyant, où dix poteaux avaient récemment tombé, rabattus par la force du vent. Mais je me suis informé que dans ces mêmes environs une chûte de quarante poteaux a eu lieu, dont la suite était l'arrêt, pour deux jours, de la communication telegraphique.

Entre Ak Punghur et Diarbékir, dans un pays de collines, mais ni difficile ni montagneux, on rapporte une chûte récente de vingt-trois poteaux, à cause du vent.

La quatrième et la sixième propositions ont une importance spéciale, surtout celle qui s'attend au deplacement de la station de la rive droite du Tigre à Mosul.

IV., VI.

Observations Générales.

Je dois remarquer que l'isolation du fil numéro 2 doit être trés exposée au danger par le grand nombre d' isolateurs en porcelaine plus ou moins gâtés et cassés. Pour en faire le calcul il serait plus facile d'inscrire le nombre de ceux qui sont entiers, qui forment plutôt l'exception que la règle.

Chaque station diffère l'une de l'autre dans l'arrangement des fils à l'interieur du télégraphe Hánéh. Quoiqu'un système uniforme ne soit pas impératif, peut-être qu'il ne serait pas mal de reconnaître un comme modèle.

Nous avons éprouvé les meilleurs accueils de leurs Excellences les Pachas de Diarbékir, de Sivas, et d'Angoreh, ainsi que du Kaim Maḳâm de Yuzgat. Et quoique je ne me permets pas de discuter le personnel des établissemens telégraphiques, je ne peux perdre l'occasion de rendre temoignage à l'extrême politesse des Mudris, l'empressement des Tchaoshs à notre egard, et à la facilité surprenante avec laquelle notre voyage de Bagdad á Izmid s'est accompli, grace aux bonnes dispositions des habitans de toute localité.

F. J. Goldsmid, Lieut.-Colonel,
Etat Major de l'Armée de S. M. B. aux Indes Orientales.

Pera, le 29 Août 1864.

La route de Bagdad à Scutari peut être divisée de la manière suivante :—

I. De Bagdad à Djéziréh; environ 130 heures ou "Section à l'est du Tigre."

II. De Djézirèh à Sivas; environ 140 heures; ou "Section de la Haute Mesopotamie, et à l'ouest de l'Euphrate."

III. De Sivas à Scutari; environ 170 heures; "Section de l'Asie Mineure."

I.—*Section à l'est du Tigre.*

Les terres basses de cette section sont plus ou moins sujettes à l'inondation ; et dans quelques endroits on a trouvé que celle-ci est la cause que la communication a été interrompue pour plusieurs jours de cette année. C'est surtout ce qui est arrivé dans le voisinage de Bagdad. Au bord de cette ville le Tigre fait une descente assez directe de 20 ou 25 heures, et, en même temps, à l'est de ce dernier, descend le Dyala, l'espace entre les deux changeant de cinq à dix et même jusqu' à trente milles Anglais. Du Dyala sort le Khalis, et c'est à travers d'un pays inondé par ces trois eaux que la ligne du télégraphe doit s'écouler vers les montagnes du Hamrin. Quoique la saison était avancée quand nous traversions cette étendue, plusieurs poteaux se trouvaient dans des marais, où l'eau était encore de quelques pieds de profondeur. Plusieurs avaient tombé, et on les avait remis dans leurs places. Enfin, à cause de ces mésaventures, la ligne avait cessé d'opérer pour vingt jours de cette année. A ce sujet je me suis addressé au Colonel Kemball, Consul Général de S. M. B. à Bagdad, pour que mon rapport soit communiqué aux autorités Ottomanes. Son Excellence Namik Pacha m'avait fait accompagner par un ingénieur egyptien nommé Ahmed Effendi, qui devait aussi de sa part rapporter les résultats de notre inspection en détail.

J'indiquai dans ma lettre au Colonel Kemball trois moyens qui se présentaient pour prévenir effectivement les désastres auxquels avait été exposée la ligne au printemps de l'année :—

1. Ou de planter quelques poteaux sur des fondations en pierre, d'une hauteur que n'atteindront point les eaux de l'inondation ;

2. Ou de substituer le fer pour le bois ;

3. Ou de changer la direction de la ligne.

J'appuyai la première proposition comme cette qui me paraissait la plus effectuelle et la moins tardive. Si on désirerait se servir de la seconde, il faudrait à peu près cent poteaux de fer entre Djédidéh et Káshkeh, qui coûteront à Bagdad trente-cinq schellings anglais par poteau. Et quant au changement de direction de la ligne télégraphique, il faudrait du moins avoir une connaissance parfaite du pays pour décider parmi les routes qui se présentent quelle est la meilleure. La route de Poste est un chemin determiné, il est vrai, mais on ne peut pas désigner comme un "grand chemin ;" et il serait, peut-être, presque aussi inconvenant de transférer la ligne du télégraphe à la dite route que de transporter les postes á la route du télégraphe. De l'autre côté, en adoptant la première proposition on pourrait très bien economiser les déboursements, en allongeant l'étendue du fil, de poteau en poteau, et, par consequent, en diminuant le nombre des poteaux nécessaires—disons par deux-tiers.

Pour les montagnes du Hamrin, hors de quelques appuis en fil de fer propres à soutenir un certain nombre de poteaux, et peut-être quelques améliorations en détail comme l'aura recommandé Ahmed Effendi, la seule chose qui me paraît instamment demandée est une surveillance suffisante. Ce *désideratum* ne peut être obtenu que par la nomination d'un inspecteur qui possède non seulement les talents nécessaires à son emploi, mais le temps de les exercer de telle façon, que rien ne soit negligé dans son arrondissement.

Des montagnes du Hamrin à Kerkuk, environ 34 *heures*, on rencontre plusieurs lits de torrents, dont la plupart, quoique larges, sont ou secs ou ne contiennent que de canaux insignifiants. Mais du moins pour quelques jours de chaque année on peut s'attendre à voir descendre les eaux de ces rivières, ou "Tchais," avec force et en abondance. Dans de pareils en-

droits les fondations en pierre* seront, pour supporter les poteaux, d'une utilité spéciale. Les deux "Tchais" dont j'ai cité les détails au Colonel Kemball sont le "Tuz Khurmati" et le "Taouk." L'année passée la descente de ce dernier a été cause d'une interruption de la ligne pour une semaine entière.

* De la hauteur du torrent quand au plus haut.

2de Proposition.

De Kerkuk au Zab Su je ne vois pas de difficulté qui ne pourrait se rémédier facilement sous la surveillance d'un inspecteur. Il faut que la ligne traverse quelques collines pierreuses, ainsi que les rivières du Kejjur Su et d'Altun Kiupri. La première n'est qu'un grand ruisseau, mais la second devient, de temps en temps, formidable; et on en fait usage pour le transport des marchandises sur les radeaux, comme à Mosul. Aussi trouve t'on de basses plaines de champs de blé, et un pays facilement ondoyant. En traversant le Zab Su,* la ligne se sert de deux poteaux qui sont placés dans le lit même de la rivière. Ces poteaux sont supportés par des fondations en pierre,† dont l'une a été presque renversée par la sape continuelle des eaux descendant des montagnes du Kourdistan. Cette faute de construction doit etre réparée le plus vite possible. Si on le désirerait, la ligne pourrait bien traverser directement le Zab Su, d'un côté à l'autre, sans appui central; mais la rivière est large, et pour que tel trajet se fasse avec sureté, il faudrait construire en maconnerie deux colonnes, une de chaque côté, plus ou moins hautes, selon les exigences du terrain.

26 heures.

* Vers 250 mètres.

† Biné.

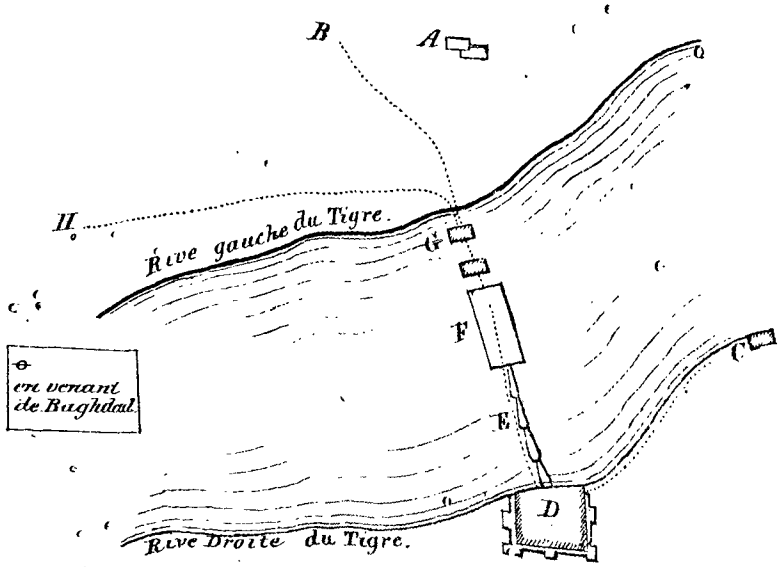
3ème Proposition.

Touchant la route *du Zab Su á Mosul, environ 12 heures*, le Colonel Kemball a observé qu' après avoir traversé la rivière du Zab, la ligne quitte la route de poste, et fait un

détour inexplicable avant de la rejoindre. Il est facile de comprendre la cause de cette déviation près de la ville de Mosul: on désire sans doute économiser le matériaux du télégraphe en prenant la voie la plus courte; et, pourvu qu'elle soit convenable, on a raison; surtout dans un pays où les chemins de poste ou de commerce sont presque informes. Mais du Zab Su jusqu'au Khazir Su, il est vraisemblable que le nombre de poteaux est plus grand, et le fil de fer plus long, qu' aurait exigé la route de poste; et, dans ce cas, je suis de l'avis du Colonel Kemball qu'on aura mieux fait de suivre la dernière.

Mais ce qui m'a paru demander une attention toute particulière c'est la passage du Tigre à Mosul. Je tâcherai de faire comprendre la situation par une esquisse explicative au bord de la feuille. * La ligne passe à droite du village de Nubbi Yúnús, sur la rive gauche de la fleuve, et par des basses terres inondées jusqu'au fleuve même, d'où elle se sert des

* En venant de Bagdad.



A Village de Nubbi Yûnûs.
B Ligne de Bagdad.
C Bureau de Télégraphe.
D Fort de Mosul.
E Pont de bateaux.
F Vieux pont, ou portion d'un vieux pont.
G Nouveau pont sous construction.
H Ligne de Scutari.

arcs incomplets d'un pont sous construction pour attendre un vieux pont an milieu des eaux. De ce vieux pont jusqu'a la rive droit du Tigre, sur lequel est située la ville de Mosul, la traversée est assez longue, et le courant passé avec rapidité : on fait le trajet, à pied ou à cheval,,par un pont de batéaux, pas toujours praticable. La ligne passe directément d'un poteau sur le vieux part, **F**, à un autre poteau sur le fort de Mosul, **D**, d'où elle tourne brusquement à gauche pour entrer le bureau du télégraphe, à une distance de quelques centaines de mètres, **C**. La construction du nouveau pont a été confiée á un ingénieur égyptien, qui n'a pas encore réussi d'achever son affaire, et dont l'ouvrage a été rudement interrompu par la levée des eaux, aprés un dommage tant soit peu convenant.

Vu 1*mt.*—Qu'au jour de notre arrivée à Mosul deux seulèment des quatres fils traversant le pont étaient disponibles pour le service publique.

2*dt.*—Que le jour de notre départ on n'avait pás réussi à faire travailler le quatrième de ces fils.

3*mt.*—Que les délais qui ont eu lieu cette année à cause des accidents dans ce lieu même ont été longs et fréquents, ainsi que nuisibles au service publique.

4*mt.*—Qu'il ne sert presqu' à rien de prendre et reprendre la ligne entière du télégraphe au travers du Tigre à Mosul, quand un messager peut toujours traverser le fleuve par de pont ou dans un bateau.

Vu les raisons susdites, je suis d'avis qu'il serait réellement convenable de fixer la station de Mosul au côté gauche du Tigre, ou dans le village même de Nubbi Yûnûs, ou entre ce village et le fleuve. Si pour Son Excellence la Pacha une communication plus immédiate serait nécessaire, on pourrait toujours faire traverser un seul fil de la station au serai. Par l'arrangement que je viens de soumettre *la ligne du télégraphe de Bagdad jusqu' à Djéziréh restera constamment sur la rive orientale du Tigre.*

4ème Proposition.

De Mosul a Djéziréh, environ 34 heures, la ligne exige une surveillance soigneuse. Je dirais que pour la section à l'est du Tigre deux inspecteurs ne seraient pas de trop. Jusqu' à la vallée du Khabur le pays est ou ondoyant ou tant soit peu montagneux; on y trouve plusieurs terres cultivées; on y trouve aussi des étendues pierreuses et difficiles à traverser. C'est ici que nous avons vu plus d'une douzaine de poteaux par terre abattus, à ce qu'on nous dit, par un vent orageux. En les examinant avec attention je m'aperçus que le bois était plus ou moins pourri, et tous avaient êtê rompus au niveau de la terre. J'aurais préféré une ligne allant directement au bord du Khabur, à la course tortue faite pour que le télégraphe évite les hauteurs escarpées en y arrivant. Et pour traverser cette rivière, large de 280 ou 300 metres, je suis d'avis de mettre une colonne en pierre de chaque côté, pour que la communication soit directe, ou (ce que coûte moins cher, et doit être une precaution suffisante) de fortifier les deux poteaux du centre avec des fondations comme au Zâb Sú.

5ème Proposition.

Du Khabur à Djéziréh il n'y a que 7 heures. La route du télégraphe cherche le bord du Tigre, qu'elle suit jusqu' au point où elle doit franchir une montagne pour se

rendre le plus directement possible à la station. Si la ville de Mosul était mise hors de la route télégraphique, et qu'au nord de Bagdad les traversées du Tigre se trouvaient bornées à celle de Djéziréh, peut-être que la question d'y avoir des colonnes en pierre* mériterait d'être entretenue. On calcule la distance à 180 mètres ; mais je me suis informé que les inondations peuvent affecter sérieusement les poteaux, surtout sur la rive droite. Pour les petits détails de ces poteaux je n'ajoute rien au rapport de l'ingénieur Ahmed Effendi, qui m'a quitté á Djéziréh, selon les ordres de Son Excellence Namik Pacha.

* Comme à Bagdad même.

On manquait du zinc à Djéziréh : et les "machines" n'étaient pas trop propres à Mosul. Dans la première station je n'ai pas vu de Mudir, et l'aide était malade. Djéziréh est malheureusement une ville que la situation rend importante au télégraphe. Entourée de montagnes, et profondément ensevelie dans la vallée du Tigre, il n'est pas surprenant qu'elle soit fièvreuse et malsaine.

II.—*Section de la Haute Mesopotamie, et à l'ouest de l'Euphrate.*

De Djéziréh jusqu'à Mardin, 32 heures, la campagne, élevée au dessus de la vallée du Tigre, a l'aspect rude, et est fréquemment et profondément entrecoupée de "Sakláns." Le "Sâklan" est une de ces brêches de terrain dont les pentes occasionelles et les lits cultivés donnent parfois le caractère de vallon à ce qui est plutôt un ravin. Le Colonel Kemball, quoique d'accord que cette route est préférable au chemin de poste, qui passe assez loin au midi par Nisibin et Dârâ, à cause de la sûreté qu'ony trouve contre les déprédations Arabes ou Kurdes, pense qu'on aurait pu mieux choisir la direction de la ligne dans les petits détails de sa

course, et surtout du côté de Middo, de Báséberin, et de la ville de Mardin.

Ces observations resultaient d'une inspection faite dans l'hiver, tandis que nous voyagions dans le mois de Juin. Cependant, je ne trouve pas que l'expérience des trois dernières années fait craindre les "Sakláns" pour les Châoshs dans la mauvaise saison autant que la boue épaisse entre Middo et Azekh, qui rend, dit-on, presque impraticable les inspections d'hiver. A Báséberin nous rencontrons un pays rude et difficile, mais on n'entend rien de graves accidents. Les mulets, toutefois, me paraissent mieux convenir au travail ordinaire des Châoshs due les chevaux du pays.

A Mardin la ligne fait un long détour pour arriver au sud de la montagne où est située la ville, pour la grimper, pour chercher le bureau du télégraphe parmi des rues irrégulières, pour s'accommoder, enfin, aux besoins de la station du rocher. Aussi, au lieu de se faire une sortie de l'autre côté de la montagne pour suivre le chemin de Diarbékir, elle se sert de la route d'entrée pour sortir, retourne sur ses pas, et cherche une traversée hasardeuse au chemin susdit, dont la distance est près de 3 heures.

A. Station : bureau de télégraphe dans la ville, sur la montagne.

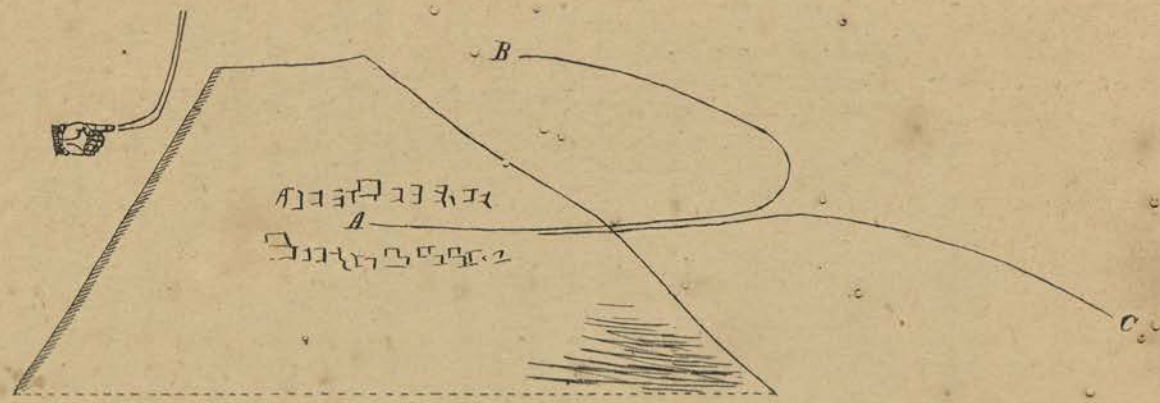
B. Route de la ligne du télégraphe de Diarbékir.

☞ Route de poste de Diarbékir.

C. Ligne venant de Djéziréh.

Si, au contraire, la station de Mardin était dans la village de Mansuriéh, ou dans les plaines, comme à Kharput, il n'y aurait pas de détour a faire en quittant les montagnes du côté de Djéziréh. La ligne irait tout droit de C à B, Mansuriéh se trouvant au dessous de B. *En tel cas,* prévoyant la néces-

6ème Proposition.


B
A
C

sité d'une communication directe avec la ville de Mardin, le Colonel Kemball a recommandé qu'un fil y soit conduit de la station.

Du moins, il vaudrait la peine de faire reconstruire la ligne du télégraphe dans la ville même de Mardin, et de replacer le bureau où il était auparavant, ou plus près de l'entrée du fil.

7ème Proposition.

Il n'y a que 20 heures de Mardin a Diarbékir. Au Gok Su je croirais qu'un poteau substantiel de chaque côté valerait les poteaux placés dans le lit du torrent.

Avant cette année la ligne traversait deux fois le Tigre en arrivant a Diarbékir. La course était directe, et on exigeait moins de matériel pour la faire que pour suivre la rive droite de l'Euphrate, sur lequel est située la ville de Diarbékir. Maintenant, à cause d'accidents résultant de cette double traversée, on a reconstruit la ligne au bord de la rivière qu'elle ne traverse plus du tout. Ce changement, dont on ne peut douter la sagesse, me paraît avoir été très bien exécuté, et promet d'ajouter, d'une manière importante, a l'efficacité du télégraphe. Seulement j'observe que les quatre poteaux, "Topebáshis," qu'on vient d'enlever des bords du fleuve, pourraient être mieux distribués qu'à présent, car ils sont les seuls du genre de "Topébashi" entre Diarbékir et Mardin. Ils conviendront, peut-être, au Gok Su.

8ème Proposition.

Quelques isolateurs dans la ville de Diarbékir doivent être mieux placés qu'ils le sont à présent, sur des morceaux de bois, cloués ou accrochés à de vieilles murailles.

De Diarbékir à Kharput, 29 heures, la question à considerer est celle-ci—quelle route doit on prendre, celle

du Mehrâb Dagh, qui est le chemin de poste, ou celle du Batman, qui est celle que suit la ligne? Le Colonel Kemball est d'avis que le Mehrâb Dagh serait la route la plus convenable au télégraphe. A cette proposition je ne pourrais rien ajouter de ma part, car je n'ai pas parcouru ce chemin. Dans l'intervalle on ferait bien de mettre, si non de poteaux en fer, les plus forts des peupliers ou des sapins dans les basses terres entre Diarbékir et Argana, où vient d'arriver une chûte sérieuse.

9ème Proposition.

De Kharput à Sivas, 58 heures, la ligne revient au côté du midi, jusqu'à qu'elle atteint la rive gauche de l'Euphrate. Suivant celle-ci, et traversant la fleuve au village d'Izz-Oghlou, elle reprend la course du nord. Passant près de Mâlâtiéh, elle pénètre les montagnes au delà de la plaine portante ce nom, et descend en suite à Sivas, sur le grand plateau de l'Asie Mineure.

On aura, sans doute, considéré le fait que ligne du télégraphe passe sans communication quelconque, à 3 ou 4 heures de Mâlâtiéh, une ville assez remarquable. Aussi cette ville de Mâlâtiéh este-elle, *selon les cartes*, dans la voie directe de Diarbékir à Sivas, Kharput étant à droite. Mais de Diarbékir au bord de l'Euphrate la route directe, s'il y en a doit être difficile.

1. Quittant Hassun Badrik, au bord de la plaine de Mâlâtiéh, pour se rendre à Hakim Khan, on arrive dans peu de temps à un point d'où la ligne se sépare du chemin. D'ici, vers $2\frac{1}{4}$ heures, *si on plantait les poteaux près de ce chemin*, changeant la direction d'une manière peu importante, la travail des Châoshs serait diminué, et le risque d'interruption de communication télégraphique serait moins imminent.

10ème Proposition.

2. Je ferais la même proposition à l'égard *des* 2½ *heures de chemin* après la première heure d'Allaja Khan en allant á Kangal.

11ème Proposition.

3. Et je pense qu'il serait meilleur si on *rapprochait la ligne d'Ulach à Sivas généralement au chemin de poste.*

12ème Proposition.

Dans cette section on rencontre quatre rivières —

1*èrement.*—Le Kiûmur Khan, un torrent qui descend dans l'Euphrate, sur la rive gauche,

2*dement.*—L'Euphrate,

3*èmement.*—La Sultan ou Tochna Su, entrant l'Euphrate sur la rive droite,

4*èmement.*—Le Kizil Irmak, près de Sivas.

Les moyens déjà adoptés pour la traversée de ces eaux me paraissent effectifs. Si l'expérience des années prouve autrement, je proposerais qu'on ne perd pas de vue l'avis du Colonel Kemball de bâtir des colonnes en maçonnerie, surtout de chaque côté de l'Euphrate. En tout cas, la précaution d'avoir toujours un fil de réserve merite d'être observée à chaque traversée de fleuve ou rivière.

A quelques stations il a été remarqué que les fils couverts de gomme élastique sont joints aux fils de la ligne hors des fenêtres des bureaux d'une façon très imparfaite. On demande à Sivas un nouvel instrument pour la ligne d'Erzeroum et de Trebizonde.

III.—*Section de l'Asie Mineure.*

De Sivas à Yuzgat, environ 52 heures, je ne vois pas que la ligne du télégraphe demande aucun changement indispensable. Il aurait été mieux, peut-être, déviter le zigzag qui a prolongé la ligne par quelques heures hors de la course directe; car selon mon idée toutes ces variations du compas

ne sont pas impératives. Encore est-il possible que je me suis trompé à cet égard, et, à tout prendre, la communication me paraît suffisamment assurée.

13ème Proposition.

On doit, cependant, corriger quelques brusques détours, surtout ceux qui se trouvent à environ une lieue à l'est de Kûvnéh. Aussi pourrait on ici fortifier et re-aligner les poteaux à l'angle formé par le changement de direction du nord-nord-ouest à l'ouest. Du même côté de Kûvnéh les fils de fer sont un peu lâches.

14ème Proposition.

De Yuzgat à Angoreh, au plus 40 heures, je n'ai rien observé du télégraphe qui demandait plus immédiatement d'amélioration que son trajet parmi les rues de Yuzgat. On ne peut trop condamner la mauvaise apparence de cette petite section de la ligne. Dans les isolateurs fracassés et manquant de soutiens on n'aperçoit pas tous les défauts qui exposent au danger la communication télégraphique. La chose est mal construite et mal arrangée.

Selon mon avis, il vaudrait mieux—

Ou conduire la ligne hors de la ville par une voie plus directe que celle qu'on a déjà choisi ;

Ou d'élever la ligne de la position basse qu'elle tient maintenant, dans les rues étroites et irrégulières, et de la soutenir par des poteaux hauts et forts, c'est à dire, dans les endroits où on ne trouve de meilleur soutien du hazard qu'une vieille muraille ou autre partie d'une maison, d'un hangar, ou d'autre espèce d'édifice précaire.

La sortie d'Yuzgat est très difficile, mais je ne suis pas en mesure de proposer une meilleure. La pays est naturellement rude et montagneux, et doit être examiné en détail. L'institution d'une inspection régulière résultera, peut-être, dans une révision de cette partie de la ligne, selon la recom-

mandation du Colonel Kemball. Du reste, elle paraît assez exempte d'accidents et d'interruptions.

Le premier "Kouâk" ou "Meuzil" auquel on arrive en quittant Yuzgat pour Angoreh est à Gûtlek, environ 5½ heures. Entre Gûtlek et la rivière du Kizil Irmak, une distance de 20 heures, le Colonel Kemball était d'avis que quelques parts de la ligne devraient être révisées, étant trop loin du chemin de poste. En me rappelant, cependant, ce que c'est que le chemin d'Angoreh, je ne pense pas que l'expérience des trois dernières années justifierait une recommendation d'y transférer le télégraphe. On ne peut mieux disposer de la question que par une inspection périodique.

A l'égard de la seconde traversée du Kizil Irmak, près du village de Yekshi Khan (ou Yakshan), je n'ajoute rien à ce que j'ai déjà écrit sur les quatre rivières dans la section précédente. Les obstacles sont ici plus grands même qu'à la première traversée, près de Sivas. Le Tchâosh qui passe cette rivière chaque fois qu'il fait son tour d'inspection accomplirait plus effectivement son devoir si le bord des eaux marquait la terminaison de sa ronde.

On a remarqué qu'à Yuzgat les fils de la ligne n'étaient pas conduites aux instruments *(Makina)* avec l'adresse et la précision requise. Aussi exige t'on un instrument de plus pour la ligne de Samsûn.

Ayant pris des chevaux de poste à Angoreh, j'ai prié M. Kersting, qui m'avait accompagné depuis Bagdad, de me faire part des observations journalières qu'il inscrirait sur la route d'Angoreh à Izmid, 70 heures.

Il m' a communiqué les notes suivantes :—

13me Proposition.

1. Entre Angoreh et Bei-bazar, 16 heures, et à 4½ heures de ce dernier, on aurait du aligner les poteaux à une distance

de 10 mètres d'où ils se trouvent à présent, c'est à dire, à l'autre côté du chemin. Quelqu'uns d'entreux manquent de soutiens en fil de fer, comme aussi dans les montagnes près d'Ayueh. Ayant observé l'endroit indiqué, je peux ajouter ma propre recommandation à celle de M. Kersting. La ligne est angulaire sans nécessité.

16ème Proposition.

2. Entre Mûderli et Cherkéss, 6 heures, on doit empêcher que les rameaux et les feuilles des arbres touchent le fil. Entre Torbâli et Geivéh on doit tailler les hautes branches pourqu'elles ne pendent pas au dessus du fil. Plusieurs poteaux sont faibles et manquent de soutiens.

3. A Bash Kiupri on rencontre da ligne de Brúsa. N'aurait-il pas été préférable de poser cette ligne à une distance de quelques métres de la ligne de Bagdad, ou plutôt d'attacher un troisième fil à ce dernière pour le temps que les deux poursuivent la même course?

4. De Sabanjéh a Izmid, 6 heures, on trouve de poteaux ou très faibles ou de bois pourri, qui devraient être replacés. Aussi devrait-on arranger de nouveau la ligne dans la ville d'Izmid de manière qu'elle n'approche pas trop près les murailles.

5. Pour la ligne de Bagdad la station de Muderlo ne paraît pas nècessaire. Assurément comme station d'une classe supérieure elle y sera toujours hors de place. A la station d'Izmid les fils passent par les fenêtres du bureau d'une façon fort imparfaite. Ca chambre est sale, et les instruments (Makina) sont trop près l'un de l'autre.

Du reste, la mesure ne serait pas insignifiante de faire souder les jointures des fils de fer, et d'appartioner les matériaux du télégraphe de telle manière et dans telles proportions que les Tchâoshs puissent réparer les accidents

sur la ligne sans attendre une réponse à leurs réquisitions faites aux Mudirs

N.B.—Un changement de ligne du Zab Su jusqu'au Khazir Su, noté dans la première section, aurait du être inclus parmi les propositions sus-écrites.

F. J. GOLDSMID, Lieut. Colonel,

No. 24 OF 1864.

From Colonel A. B. KEMBALL, *C.B.*,

To Lieut. Colonel F. J. GOLDSMID,
On special duty in Turkey.

SIR,—I have the honour to enclose for your information and guidance copy and translation of a telegram to my address from Her Majesty's Ambassador at Constantinople, dated 10th instant, by which you are empowered to undertake the mission entrusted to you by Colonel Stewart for the inspection of the Telegraph from Bagdad to Scutari.

2. Having communicated this telegram to Namik Pacha, His Excellency has replied that although he is himself without corresponding instructions from the Porte, he will be happy to depute an officer on his part to accompany you to Mosul for the purpose of examining the state of the line within the limits of his jurisdiction, and of reporting to His Excellency what portions, if any, may be found to need repair.

3. A similar course I presume will be followed by the governors successively of the several districts through which you will pass.

4. They have not, you will observe, been authorised to undertake immediately any alterations or repairs that you may

deem desirable, but it would serve doubtless to facilitate the execution of the Porte's intentions hereafter did you submit to them also, through the medium of the officers whom they may respectively associate with you, any plans that you may have to propose for the improvement and efficient working of the line.

In placing at your disposal my reports of a journey undertaken on the same duty in 1860-61,

I have the honour to be, &c.

A. B. KEMBALL, Colonel,
Political Agent in Turkish Arabia.

British Residency, Bagdad, 12th May 1864.

Copy and Translation of a Telegram.

From HER MAJESTY'S AMBASSADOR, Constantinople,

To HER MAJESTY'S CONSUL GENERAL, Bagdad.

Dated Constantinople, 28*th Nisan* 1280 / 10*th May*.
Do. Bagdad, do. 1864.
Received do. do. ,,

The Porte has nothing to say (object) to Colonel Goldsmid's inspecting the line of Telegraph from Bagdad to Scutari as instructed by his immediate superiors. Inform the Colonel that the Telegraph officers will be directed to do everything needful to facilitate his affairs.

2. Explain to him clearly, however, that it is at the request of the Porte that this will be done.

3. The Porte being on the point of deputing Signallers to the Mosul and Diarbekir Stations, has no intention to avail itself of our Signallers.

HENRY BULWER,
English Ambassador.

INDO-EUROPEAN TELEGRAPH DEPARTMENT. [*Bombay*]

No. 32 OF 1864.

From Colonel A. B. KEMBALL, *C.B.*,

To Lieut. Colonel F. J. GOLDSMID,
On special duty in Turkey.

SIR,—The Porte having again declined the services of the English Signallers detached from the Indo-European Telegraph Department for temporary employment at Mosul and Diarbekir, it only remains for me to suggest that you should at once proceed to carry out Colonel Stewart's requisition, taking with you Mr. Assistant Superintendent of Telegraphs Kersting, whom I have directed to accompany you as far as Constantinople should you desire it.

2. Assuming that the arrangements he had proposed would be sanctioned by the Porte, Colonel Stewart observes in his letter to me, dated Bussorah, Faô, 2nd-3rd May :—

"Between Bagdad and Diarbekir I am sure Colonel Goldsmid will have learnt everything it is necessary to know for preparing such a general report of the line and offices as we want, and he might go on from Diarbekir to Constantinople by post or in any way that was most convenient, only taking care to notice particularly the points to which your report specially referred." "But even in that case," he adds, "if he thinks it decidedly better to take some one, either Mr. Kersting or Mr. Gregory might accompany him."

3. As Mr. Kersting's services are no longer needed at Diarbekir, they are now of course more especially available to you.

I have the honour to be, &c.

A. B. KEMBALL.

British Residency, Bagdad, 18th May 1864.

[*Bombay*] INDO-EUROPEAN TELEGRAPH DEPARTMENT.

To Colonel A. B. KEMBALL, *C.B.*

Kharput, 30th June 1864.

SIR,—With reference to letters from your office Nos. 24 and 32 of the 12th and 13th May last, which I had the honour to receive before leaving Bagdad, I think it right to communicate to you the fact that since parting with Ahmed Effendi at Jezireh I have not been accompanied by any Turkish engineer officer along the telegraph line up to the present time, nor does it appear probable, without special instructions to that effect being issued from head-quarters, that any similar appointment will be made to facilitate the objects of our mission.

2. There is one point in connection with the future success of the whole scheme which I think, before closing my reports to your address, I should advert to as of primary importance. It is the precarious state of the line at Mosul. Ahmed Effendi will be able to inform you in detail of the failure to complete the bridge, the transfer of posts crossing the river from separate piers to the unfinished arches of the new construction, the loose and imperfect manner in which communication was kept up on either side with the Mosul station at the present period of our visit, and the recent damage done to the line immediately bordering on the left bank. I should deferentially suggest for the consideration of the authorities concerned that the permanent station be fixed at Nubbi Yunas, with a single wire communication for Mosul, as proposed by you for Mardin, if necessary, or in the immediate neighbourhood of the bridge on the Nubbi Yunas side, with no further telegraphic communication with Mosul whatever, messengers easily performing all that is required. A station at Nubbi Yunas for Mosul, and one at Mansnieh for Mardin, would, I am quite convinced, be of great advantage to the efficient working of the whole line, and need

entail no enhanced cost. The latter proposal is now rendered doubly urgent by the transfer of the telegraph office still more within the town to the westward than when visited by yourself three years ago.

3. Here at Kharput the distance between the city and telegraph office at Mazara is about three miles—far greater than would be the case under either the above arrangements. It is true that the pacha resides at Mazara, and that much communication is looked to from the neighbouring rich villages, but there is a large population in Kharput equal, if I am not misinformed, to that of Mardin.

4. At Diarbekir you will be glad to learn that the station, though still inconveniently situated, has been removed from the mosque precincts to which you recorded a strong objection. The truth, however, of your recorded remark, to the effect that the direction of the line would have been improved by avoiding crossings of the Tigris between Diarbekir and Shekerli, has been practically illustrated by late accidents which have occasioned the said crossing to be abandoned in toto. The line has now been wholly transferred to the right bank of the river—an arrangement carried out, so far as I can ascertain, with economy as well as ability under the superintendence of Suliman Effendi, the telegraph mudir of Diarbekir.

5. I find as a general rule that more accidents to the line occur in the low ground near rivers, extended gradual slopes, or in marshes, than on high ground and in mountainous country. Ahmed Effendi will have ere this submitted a long list of proposed improvements. If only half the number of the piers which he has suggested be erected, I am of opinion that the arrangement would be beneficial, especially for places like Kára Irsum and the larger and wider chais between Kifri and Kerkuk.

6. It does not appear to us that any material change has been made on the line since the period of your visit in respect to general condition. Not one joint have we found soldered up to Kharput; half a dozen whole porcelain insulators in succession is an exception to the rule; and supplies of necessaries are not always attended to, whether it be in the matter of entire insulators with chaoshs, or the more important one of elements for a battery as at Jezireh. On the other hand Mr. Kersting remarks that although straining insulators are too few, and ordinary insulators made to serve the purpose with small binding wire, yet the general distribution and application of the straining insulators appears judicious. As formerly remarked there is not a single straining insulator between Mansurieh (Mardin) and Shekerli, near Diarbekir. The few used at the crossing of the Tigris in the latter vicinity have been distributed throughout the newly-constructed section on the right bank.

I have the honour to be, &c.

F. J. GOLDSMID.

Appendix C.

No. 27 of 1866.

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

From Lieut. Colonel F. J. GOLDSMID,
Superintendent Indo-European Telegraph,

To the SECRETARY to GOVERNMENT, Bombay.

Dated 17th March 1866.

SIR,—I have the honour to submit for the information of Government two reports (I. and II.) on the route recently taken by Major Smith and myself, under the authority of the letters and telegrams noted in my despatch of the 11th December last, from Ispahan. We left the Persian capital on the 4th December, and reached Gwadur on the 17th February. The whole journey was accomplished in seventy-six days, or one day less than that from Bagdad to Izmid, a report on which I forwarded from Constantinople with letter in the Political Department No. 33 of the 31st December 1864.

2. The first enclosure is Major Smith's account of our joint journey to Sabristan, a place S.E. of Kirman, where we separated on the 21st January; his own subsequent route to Bunder Abbas, and Mr. Vice-Consul Johnston's report on portions of the coast visited with Major Smith, between Jashk and Chonbar.

3. In the second are my notes of the journey from Sabristan to Chonbar by Bampur, Fanoch, and Benth. The lower road to Bampur and the Fanoch Pass into Mekran had not to my knowledge been heretofore traversed by any European. And if we except Pottinger and Grant, whose travels are more than half a century old, the same remark

applies to the whole section east of Bam, as also the coast line visited by Major Smith and Mr. Johnston.

4. As all details will be found in the above noted enclosures, I propose in the present communication to review the journey performed in its bearing upon the question of a complete land line of telegraph, submitting to the consideration of Government such propositions as may appear warranted by the light of more recent experiences.

5. From Ispahan to Kirman, a distance of 434 miles, there is nothing which can be held physically obstructive to setting up telegraph posts. The measure would be costly because there is no wood available on this line, and it would be necessary to obtain the cooperation of the executive as well as the consent of the head-quarter government of Persia. But with funds available, and authority to treat, I should have little doubt of the removal of other difficulties. The governors of Yezd and Kirman would naturally be well pleased to keep their respective territories unaffected, as at present, by the wires, or free from immediate head-quarter influence and centralisation, but the many merchants, especially in the former place, would on the other hand sincerely welcome the introduction of a means of instantaneous communication with Bombay and to the westward. It would be a great local advantage, as well as an important step in civilisation, to bring the abovenamed towns into the telegraphic *reseau*. And politically it could not be otherwise than a mutual benefit to Her Majesty's Government and the Shah to admit the merchants of Eastern Persia to an intercommunication, the frequency and rapidity of which must serve to develop trade and strengthen the bands of friendship.

6. There are at this moment about 4,500 Parsees at Yezd and Kirman, and at Yezd 1,500 Jews. The Hindoos of Shikárpoor, although few in number, have a nucleus at

either place sufficient to become a notable element of trade if duly fostered. At present Jews, Parsees, and Hindoos are labouring under the disadvantages which more or less attend all such persons in Mahomedan countries. I do not pretend to say that the telegraph would be a direct means of amelioration of their state, that it would make the Moslem debtor more punctual in the discharge of his debts, or the Moslem ruler more chary of imposing the capitation tax; but it is a wedge, and applied in the right direction.

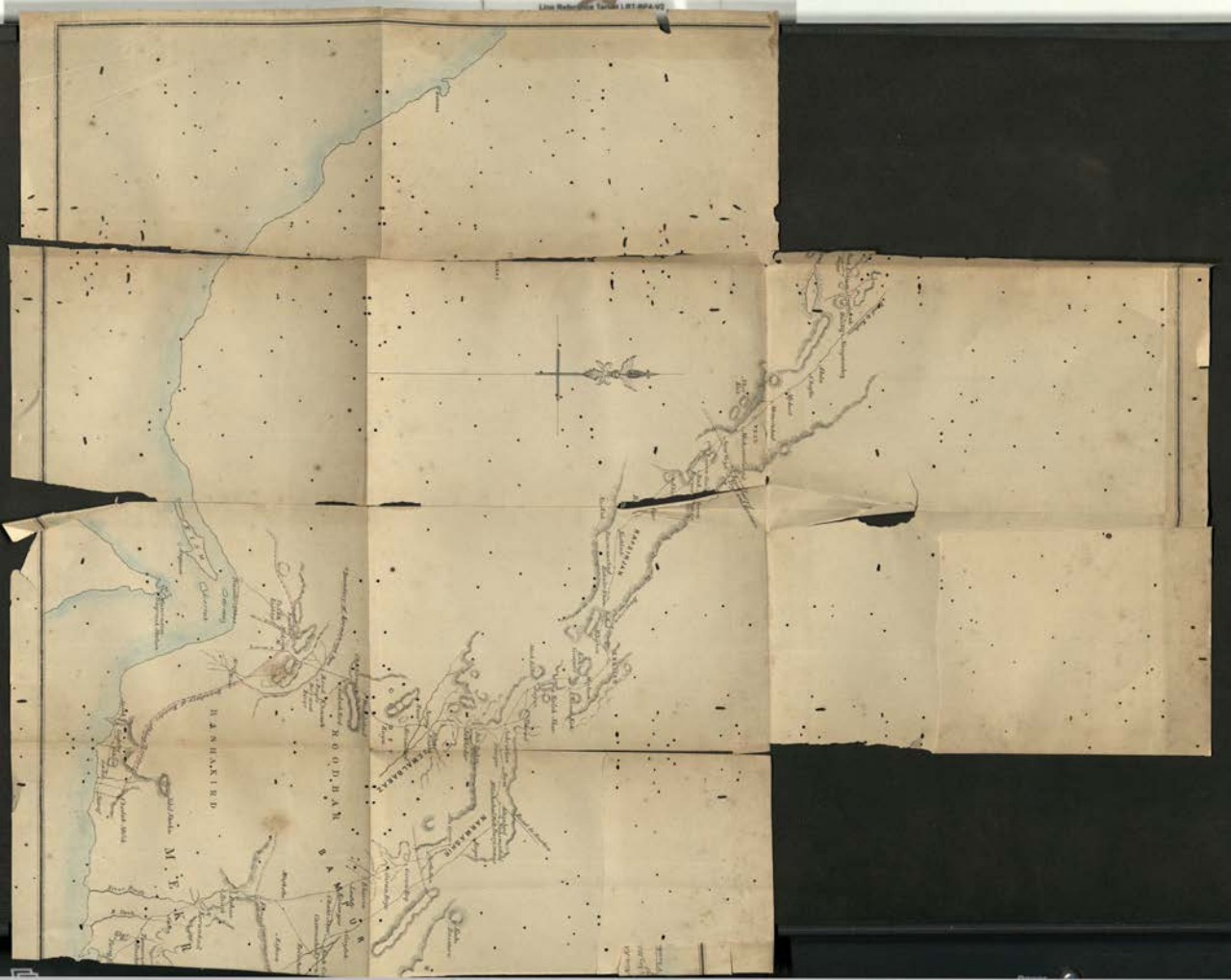
7. The Mahomedans themselves in these parts have already benefited by their proximity to British India. Those who have travelled thither are men of much apparent intelligence and freedom from prejudice. The mercantile class is not a small one, and is very influential. But although they in some degree appreciate the advantages which would accrue to them from the telegraph, they are unable to come openly forward in its favour so long as the priests and officials of government are not with them. My advice to the Mussulman merchants was to address the Shah by petition. Yet I fear that unless the governors were on their side they would not venture on the step. Moreover in Persia it is more than probable that the royal answer would involve a demand for moneys to meet a problematical expenditure suggested by their requests.

8. From Kirman to the sea there are physical obstacles to be overcome, of which we know sufficiently to make it premature to fix at this moment the precise direction for a line. At the same time I have no doubt whatever that if Government be willing to press the measure a junction could be effected at Bunder Abbas by a route more favourable to its erection and maintenance than that taken by Major Smith under the auspices of the Wakil-ul-Mulk. This route is the one frequented in winter. That used by the Kafilas in summer is shorter, if not otherwise preferable.

9. Reports on the feasibility of erecting a coast line of telegraph between Bunder Abbas and Gwadur have already, it is believed, been laid before Government; and I have never heard that any difficulties had presented themselves to the scheme. I admit that there has been no complete survey of this section. Colonel Pelly went, I understand, from Bunder Abbas to Jashk by the land route, and there have been visits from boats or steamers at particular ports or fishing-villages. Mr. Johnston has now reported on his and Major Smith's route from Jashk to Suraf near the Sadech river. From the Tenk* river to Chonbar I myself came down near enough to the coast to estimate its general features. I was at Gweltur more than two years ago, and on that occasion sailed, close in to the shore, from Chonbar to Gwadur. Still it is true that even now there has been no complete survey as in the case of the Gwadur and Kurrachee line. I do not, however, think that more is necessary to be done in this respect. No part of the section can be regarded as a *terra incognita*. Physical obstacles alone intervening, we might commence operations without delay.

* *Vide* Map for these places.

10. And I can anticipate no better whole land line than that now suggested. From Gwadur to Bunder Abbas, thence to Kirman, thence to Yezd, thence to Ispahan, the junction for Teheran and Bushire, the distance is great; but the advantages are great also. It may be said that the existence of a land line already from Bushire to Ispahan should make the former town the point of junction. Such a plan looks certainly more economical, for there is less ground to be traversed. The line would then go along the coast of Persia from Bunder Abbas to Bushire. But it would run through a tract in which there is no town of importance: it would be a mere alternative line to the cable, and nothing more: and it would have to be set up in a country reported to



ROYAL ASIATIC SOCIETY
OF GREAT BRITAIN & IRELAND
THE INDIA OFFICE
LIBRARY

ASIATIC SOCIETY
OF BENGAL

TEHRAN
ISPAHAN
Segzi
Julfa

be difficult and unfavourable to the due security of the posts.

11. Or it might be suggested that the line pass from Bunder Abbas at once to Shiraz, or through Kirman to Shiraz. Either route would be long and difficult, but for several reasons I think either preferable to that of the coast to Bushire direct. The most important reason is that it secures a second alternative line to that now between Shiraz and Bushire, the least safe section of the whole Persian telegraph.

12. As regards the question of advisability for such an alternative land line at all, I would earnestly and respectfully impress upon Government that this is an object of which the necessity is so apparent that attainment is worth a very considerable outlay. Without alluding to former correspondence and arguments, I would urge that the realisations of the Indo-European Telegraph during its first year, under difficulties of no ordinary kind, have given such certain proof of eventual success if communication be only kept up rapid and unbroken: the recent improvement in the corrrespondence through Turkey is so marked and steady: the talked-of completion of the Upper Turco-Persian line near Bayazid is likely to afford such additional security to the Turkish telegraphs: the grand alternative line through Russia is so calculated to meet the contingency of failure in Turkey, and the late convention with Persia is so favourable to both the main and alternative lines, that it has become imperative on us to provide against mishaps to the cable. And I know of no better way of doing so than by completing a full alternative land line to the submarine from Gwadur to the Persian wires. Nor do I speak here of political considerations.

13. The upper route from Kirman, by Bam and Bampur, to the coast of Gwadur, though shorter and more direct than that by Bunder Abbas, is objectionable from two causes:—

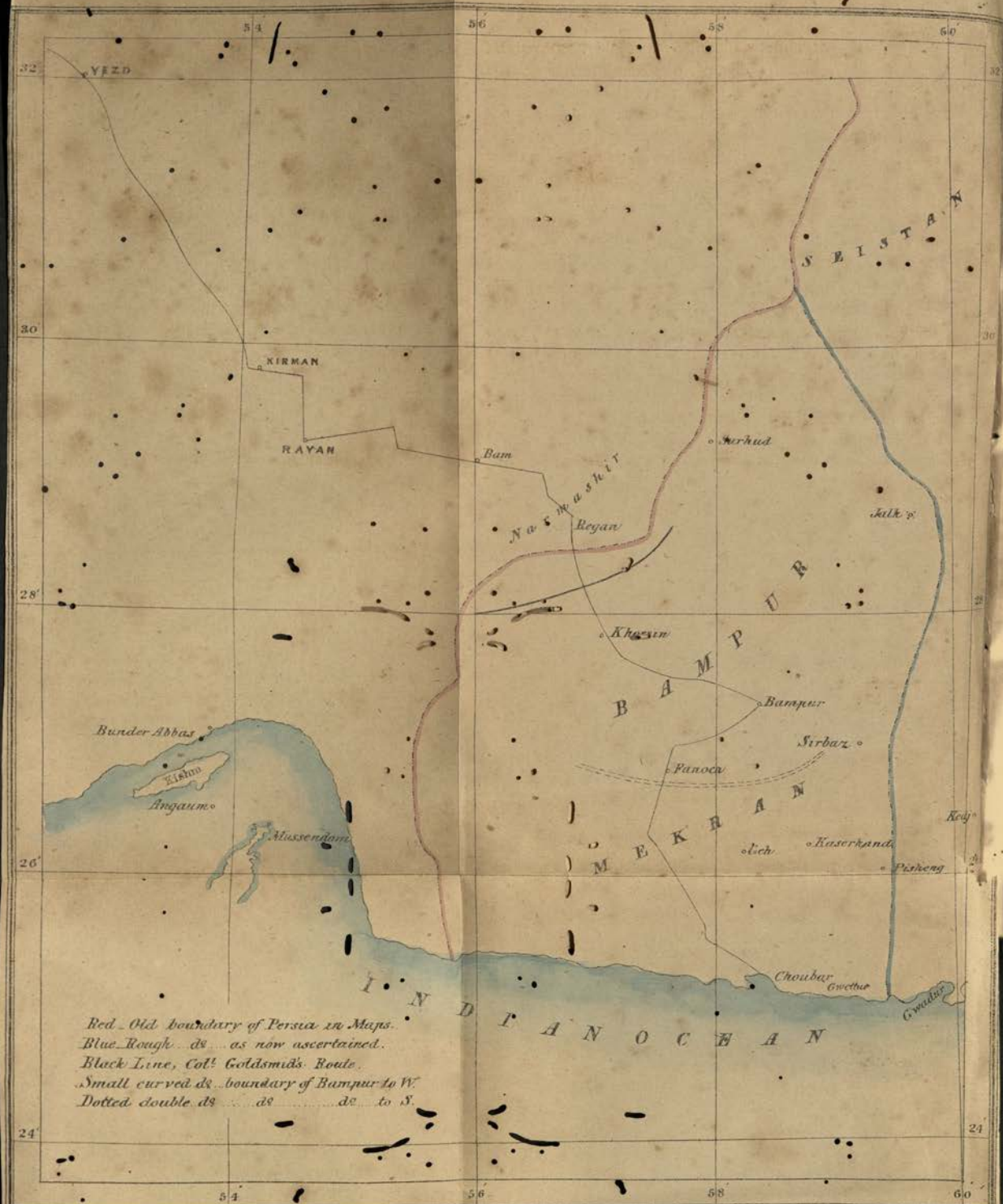
1*st*.—The extensive tract covered by barren rocks, and intersected by mountain streams, for the first half of the road between Regan and Bampur; and the passes into Mekran, which present long, difficult lines of access to the seashore, are physical obstacles which it would be well to avoid.

2*nd*.—The want of water and shelter, especially in the hot dry season, for distances which could scarcely be accomplished in a single day.

14. But the difficulties are not insuperable, or indeed so formidable as those which have already been overcome in Eastern Mekran. And rather than not see carried out the alternative land line, I would propose adoption of the road taken by myself as far as Kalanzao, and thence the caravan track direct to the Fanoch pass, meeting my road again and keeping it to Chonbar.* They tell me there is a better road still by Kaserkund to Gwadur, but this I had not an opportunity of proving. Were the question a purely political one, the proper course would be to take the line up the Kej district of Kelat to Sirbaz, where it would fall into Persian territory more immediately under the surveillance of Bampur than any part of the coast. As our dealings in the matter must chiefly be with Persia, our greater security would naturally be found in those parts where her government is more settled and less affected by local revolution.

* *Vide* Map.

15. The question of Persian occupation in Beloochistan has, I think, been fairly solved by the present journey. In modern maps we are accustomed to find a red line drawn in about long. 59° and coming westward to long. 54° 50′ as defining the eastern boundary of Persia from Seistan to the Indian Ocean. The state of the case is, however, very different in reality. We should be much nearer the truth



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56
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YEZD
KIRMAN
RAYAN
Bam
Narmashir
Regan
Surhud
Jalk
SEISTAN
BAMPUR
Khorsin
Bampur
Sirbaz
Fanoca
MEKRAN
Kaserkand
Pisheng
Kedj
Choubar
Gwettur
Gwadur
Bunder Abbas
Kishm
Angaum
Mussendom
INDIAN OCEAN
Red_Old boundary of Persia in Maps.
Blue_Rough ... do ... as now ascertained.
Black Line, Col.l Goldsmid's Route.
Small curved do ... boundary of Bampur to W.
Dotted double do ... do ... do ... to S.

were the line to curve to the eastward before reaching the sea, taking in from the Bampur district, southwards, a tract in extent nearly 4 degrees of longitude. The wazir of Kirman, Mahomed Ismail Khan, *de facto* governor of the province, has lately received from his sovereign the title of Sirdar of Beloochistan, and the honour is not in this instance mere sound and emptiness. Attached to Kirman, and forming its Beloochistan division, are the two large districts of Bampur and Mekran. The first, which lies to the north, is about as much Persia as Kirman Proper. It is governed by a Persian, and garrisoned by Persian regular troops as well as irregulars and Beloochees. The second, Mekran on the south, is immediately under Bampur, but is governed by a Belooch; and there are as a rule no Persian troops to garrison its towns or forts. The system of government prevailing here is to acknowledge every legitimate chief who on his side acknowledges the Persian supremacy, or to set up an obedient competitor who is not likely to be wanting.

See tracing annexed.

16. When I passed down from Bampur to the sea one Shai Abdulla, chief of Kaserkund, had been recently murdered. The Persians acknowledged the son in succession, but divided his father's chiefdom. Shai Abdulla had held both Sirbaz and Kaserkund. The son retained only the latter, Sirbaz being bestowed upon Chakur Nharin, a chief well affected to the sovereign power. The policy, such as it was, did not serve to stifle the suspicion that Persia had instigated the murder of Abdulla, for the victim was her avowed antagonist. Consequently the Kaserkund, or direct road from Bampur to Gwadur, was reported unsafe, and the authorities were unwilling that I should proceed by it. But the road to Chonbar by Fanoch though more circuitous was to all appearance quiet. I travelled along it a distance of 231 miles under the escort of an old Persian sent by the governor of

Bampur and his four Beloch attendants. My own two Persian servants made up the whole party. We had started with two armed Beloochees, but they left us before entering the pass. Of the rest I was the only one who could boast of firearms. Each wore the costume of his country, and there was no attempt at disguise. The Wakil-ul-Mulk had urged upon me the propriety of adopting a Persian cap between Bam and Bampur, and a Belooch dress between Bampur and the sea, but I saw no occasion to follow the advice, nor did others press it on reaching the named localities. As for my servants one wore a bright green and the other a chocolate vest as though newly arrived from the Teheran bazaars. If our presence ever caused a feeling of mistrust and alarm, there was certainly no attempt at molestation, and my guide was well known as a collector of revenue. The old man assured me that the sight of his Kirman skull-cap was sufficient to warn off intruders; and the notion that we were a party of "Cajars," though not favourable to intercourse with the people, was certainly conducive to peace and privacy. I took advantage of every opportunity to declare my nationality, but the company in which I travelled was not calculated to invite confidence.

17. The Persian tenure of the sea-coast is not like that of Bampur. The minister of Kirman frankly told us he would give no passports for landing there. Ibrahim Khan said he would take no responsibility for the telegraph along the shores west of Gwadur and Jeori. The country is theirs, inasmuch as tribute is paid to Persia by Mir Abdulla, chief of Geh, and he repays himself by levies from his neighbours. Din Mahomed Judgal, who has immediate control of the coast from Chonbar to the frontier of Kej, is married to Mir Abdulla's sister, and may therefore be supposed in some way attached to his interests. There is no mistake about the line of boundary with Kej which is clearly defined. It is

just as I formerly surmised and reported. A point in Gweltur Bay, the mouth of the Dast Khor, is the termination on the sea board of a line drawn east of Jalk and Dizzuk from Seistan, as illustrated in the annexed tracing. Sirbaz and Pishung are on the Persian side. Toomp and Jeori belong to Kej or Kelat. My opinion is that if we wish to set up a line of telegraph from Gwadur to Bunder Abbas or elsewhere to join the present Persian line, we must treat with Persia for permission to do so, only the reference should be made advisedly.

Report on mission to Mekran, No. 19 of 22nd February 1862, to Commissioner in Sind, paragraph 102.

Paragraph 20 of letter to Secretary to Government, Political Department, of 19th December 1863, and subsequent Reports *passim*.

18. The following might constitute the heads of a Treaty, Political as well as Telegraphic :—

I. To set up a line of telegraph ourselves, and at our own cost, from the Dast Khor in Gwulter Bay to Bunder Abbas, making our own arrangements with the Imam of Muscat and local Belooch chiefs. Whether an agent of the Shah should be a party to all, or any separate agreements herein, is a matter for consideration and discussion at Teheran. The revenues of this line must be our own.

II. To provide iron posts, wire, and all material (with or without charge—I should recommend the latter) for a line from Isaphan to Bunder Abbas, on the understanding that it is to be at our disposal in the event of damage to the cable, and that we are to be allowed a certain number of employés at Yezd and Kirman. The revenues of this line to belong to Persia.

III. To define the Perso-Belooch frontier so as to prevent all future misunderstanding hereon.

19. Any details might now be premature. I reserve the estimate of cost, and a draft of proposed Convention, until the further instructions of Government are received.

20. I have alluded to probable opposition on the part of governors of provinces and mullas in Persia. To the last named an innovation like the electric telegraph must foreshadow detriment in every Mahomedan country. Any new light from the West is antagonistic to the bigotry and prejudice upon which the spiritual guides of the people thrive. With the first I think that the adverse feeling would give way to argument. The governor of Yezd, Mahomed Khan, has been in Paris and London, speaks French, and readily accepts, in some sense, the customs of Europe. But like most of his fellow-countrymen who have just looked in at the threshhold of civilisation, he cares little about applying his knowledge to the profit of the mass: and if his advisers tell him that his interests will be affected by the introduction of the wires into his capital, he believes them, or at least acts under their advice. The wazir of Kirman is a man of different stamp, and swayed by different impulses. Naturally shrewd and intelligent, possessed of great local experience, thoroughly acquainted with his own people, and fairly so with Europeans, energetic and persevering in a patriotic, however questionable policy, Mahomed Ismael Khan, the merchant minister of a Shahzada, but in reality the plenipotentiary himself, foresees in the telegraph a means of constant interference in his government on the part of those whose power he must acknowledge, whose ignorance he must keep from harm, and whose covetousness he must satisfy. He does not wish to be shackled with this chain in addition to those which already restrain his movements, and few that will not admit the justice of his fears. At the same time I believe that he may be brought to see benefits in the telegraph which will more than outweigh

the evils anticipated. He is not tied down by Oriental prejudices, and is sufficiently enlightened to practise as well as appreciate frankness. He is worth securing as a coadjutor from his great personal energy and influence, and I cannot but consider his stay in Kirman most desirable in the event of the telegraph being carried through that town.

21. I readily subscribe to all that Major Smith has said of the civilities we experienced when together. At Bam, Rugun, and Bampur there was no diminution of courtesy or friendliness. The unconditional admittance of an English officer to a little-known country in partial revolt, and one in which proceedings have been officially watched and questioned, gives strong evidence of the existence of a liberal feeling in Persia honourable to its government.

22. Major Smith's valuable report will speak more for the writer than any eulogium on my part. I think myself fortunate in being associated with so able an officer, and one so well adapted to secure the good-wishes and aid of the Persian authorities in his offical capacity of Director. Mr. Johnston, who joined him at Bunder Abbas, returned to his duty on the 3rd instant. I trust that his good services on the occasion reported will meet with approval, and respectfully call attention to the useful and interesting information contributed by him on the Coast of Western Mekran.

23. The necessity of attending to a number of references in the Telegraph department, and reading over much correspondence which had accumulated in a long absence from Bombay, combined with my departure this day for Madras and Calcutta, have caused me to write a much more rambling and less comprehensive report than I had proposed. But I trust ere long to submit to Government in another form several data collected in our recent journey which may be useful in elucidating the present condition of Western

Beloochistan. Except as regards the strictly political decision of territory, I would mention that all references made in this letter to the accompanying map imply Major Smith's map of our joint journey attached to his report.

I have the honour to be, &c.
F. J. GOLDSMID, Lieut. Colonel,
Superintendent Indo-European Telegraph.

From Major R. M. SMITH, R.E.,
On special duty,

To Lieut. Colonel F. J. GOLDSMID,
Director Indo-European Telegraph.

Bombay, 7th March 1866.

SIR,—I have the honour to submit the following report of the journey I lately performed in your company from Teheran to the neighbourhood of Bam in the province of Kerman, and of my subsequent route from the point at which we separated to Bunder Abbas. I also enclose a copy of Mr. Vice-Consul Johnston's report on the western portion of the coast of Mekran, the materials of which were collected in the course of our passage by land from Jashk to Sooruf, the eastern boundary of the territory held from Persia by the Sultan of Muscat.

2. The object of our journey was to examine the extensive tract of country lying between Ispahan and Gwadur, with a view to the continuation and ultimate union of the Persian and Mekran coast land lines of telegraph. This examination naturally included the political as well as the physical state of the districts to be traversed.

3. The general plan we proposed was as follows: to go together from Teheran by way of Ispahan and Yezd to Kerman; there to separate, you going through Beloochistan by Bam and Bampur, and I by Bunder Abbas and Jeshk to Chonbar or Gwadur, where we were to meet. This plan, slightly modified by unforeseen circumstances, was carried into effect.

4. On the 4th December 1865 we left Teheran with five Persian servants, and rode "chapar" or post to Ispahan, which we reached on the morning of the 8th. As the telegraph already passes over this portion of the road (260 miles) it is unnecessary to make any remarks upon it in this report. At Ispahan we were detained ten days waiting the arrival of passports or letters of recommendation from the Persian government, and procuring horses and mules for our journey to Yezd. Everything being at last ready, we started on the 18th.

5. The road from Ispahan to Yezd consists of three natural divisions—1*st*, fifty miles or nearly so in an easterly direction over the flat plain of Ispahan; 2*nd*, thirty miles in the same direction over hilly ground, the continuation evidently of the great range of hills that passes by Koom, Kashan, Kohrood, and Natenz; and 3*rd*, one hundred and twenty miles in a south-easterly direction over an offshoot of the great plain of Khorasan. Coming from Teheran to Yezd by Ispahan one is consequently obliged to cross the Kohrood range twice—first at Kohrood itself, where the hills are high and rocky, and frequently impassable from snow in winter, and secondly fifty miles to the eastward of Ispahan, where they are much lower and less precipitous; whereas the direct road from Teheran by Kashan and Nain is over one continuous plain. But it may be well to give a fuller description of the road by extracting the following items from my diary.

6. *December 18th.*—Starting from Julfa we rode nearly four miles along the southern or right bank of the Zainderood (lit. Living River) which we crossed by the lowest of the five fine bridges of Ispahan. Thence our road passed over seven or eight miles of a well-cultivated district irrigated from the river, and containing several villages surrounded by trees and pigeon-towers. From the fields and gardens we gradually ascended above the level of the irrigation in the direction of a prominent peak at the northern end of an isolated hill which we afterwards passed close to our right.

7. This peak is nearly east of Julfa, and is distinctly seen from Ispahan. From the point we again descended to an extensive plain on the level of the irrigation, in which was situated, some four miles off, the village of Gulnabad, fourteen miles from Ispahan, where we halted for the night.

8. This village, which is furnished with an old mud caravanserai, consists chiefly of ruins which date from the Afghan invasion in the early part of last century. Near it was fought the battle in which the Persian army was defeated immediately before the siege and capture of Ispahan. The water is slightly brackish. Bearings from the caravanserai: small conical peak on the road to Ispahan 255°, Kolah Ghazi 192°, snow peak near Natenz 354°.

9. *December 19th.*—Started from Gulnabad at 10 A.M. and reached the caravanserai of Segzi at 1-30. P. M.: distance fifteen miles. The road is over a perfectly flat desert plain, with large patches of white salt excrescence on the surface. On the northern horizon are the hills in prolongation of the Kohrood range, and on the southern, beyond the Zainderood, the lofty range containing the well-defined peak of Kolah Gazi. Segzi is a considerable fortified village, with a good caravanserai outside the walls. Bearings: small

conical peak on the Ispahan road 261°, Kolah Ghazi 220°, highest near point of Natenz range 49°. The water is brackish.

10. *December 20th.*—Left Segzi at 10-10 A.M. and reached Kupa at 3-10 P.M.: distance twenty-one miles. The road, which is very good, passes over a bare flat desert with a slight gradual rise toward Kupa. Ten miles from Segzi on the roadside we passed a small hauz or tank of rain-water and another six miles farther on. The caravanserai at Kupa is one of the finest I have seen in Persia. The foundations are of stone, and the superstructure, which is in good repair, of hard burnt brick. The entrance and a new tank in front of it are both handsome buildings. Over the gateway there are large open belakhanehs (upper rooms) for the use of travellers in summer. Kupa itself is a small town, enclosed by a substantial wall with flanking towers, and probably contains about four hundred houses. Bearings from Kupa:—

Small conical peak on Ispahan road 262½°.
Kolah Ghaz 238½°.
Highest near point in prolongation of Natenz range 350°
Prominent bluff in do. do. do. 52°

11. *December 21st.*—Started from Kupa at 10-20 A.M. and arrived at Laghereh at 5-35 P.M.: distance thirty miles. From Kupa the road ascends by a gentle slope to the foot of the range to the left of the road which we have been gradually approaching since we left Ispahan. Six miles from Kupa we saw a few houses close to the road on our right, and a village about a mile off to our left. Within four miles of the entrance to the hills, and about eleven from Kupa, we passed the larger half-ruined village of Mushkinun, a mile and a half to the south by west a small domed tomb called Imam Zadeh Cossim. Close to the foot of the hills, three or four

miles to our left, we saw a number of mazrach (cultivated places) and small village. At the point where our road entered the hills (four miles from Mushkinun) we passed the village of Tudesk, whence we wound along a valley deeply covered with snow, and containing many small villages and mazrach; among others, Sadikabad two miles, and Paperanna five miles from Tudesk. We intended halting for the night at a place called Mazrach-i-Yezdi, but having missed it in the snow we pushed on to the small village of Laghereh on the eastern side of the crest of the hills. The snow was deep, and the weather intensely cold, so much so in fact as to freeze our beards and moustaches into a solid mass, and make it necessary to walk on foot a great part of the way. When passing the crest we observed some twelve or fifteen miles to our right an extensive sheet of water, which I have no doubt is a lake surrounded by marshes in which the waters of the Zainderoor are dispersed and lost. It may be here remarked that none of the rivers of Central Persia flow into the sea. Some, like the Bendenier, flow into salt lakes, while the majority are simply absorbed in the desert, only part of the available supply of water being utilised in irrigating the country. Arriving at Laghereh after dark we had some difficulty in getting a place to pass the night in as the male inhabitants had fled on our approach, taking us for the servants of the government, privileged and prepared to plunder them of their little all. Bearing of small conical peak on Ispahan road from the point, four miles from Laghereh, where we crossed the ridge, 268½°.

12. *December 22nd.*—Started from Laghereh at 10 A.M. and reached Bambiz at 2 P. M.: distance sixteen miles. From Laghereh the road descends, winding along between the hills, until it emerges at their feet on a glacis slope facing the eastward, on which some four miles from the last of the hills is situated the large village of Bombiz at which we

halted. In the valleys between the hills we passed a good many villages and mazrach, each provided with a small defensible tower on a neighbouring eminence. Poodar, the largest of these villages, situated about seven miles from Laghereh, has a good-sized square fort. Most of the villages we were told are the property of inhabitants of Nain. The last of the hills which we passed before debouching on the plain are of dark colour and fantastic form. One of them, by the side of the road four miles from Bambiz, is a sugarloaf-shaped peak, seen as a clear landmark from a great distance on the Yezd road. Bambiz is a village of perhaps eighty or hundred houses in the open plain, with no trees or gardens, and but very little cultivation. There being no caravanserai we lodged in the house of an old Hajji. The inhabitants, although civil enough, were intrusively curious. Out of doors we were accustomed to be stared at, but here the people climbed on each others shoulders to look at us through the windows.

13. *December 23rd.*—Made a short march of twelve miles from Bambiz to Nangumbaz, the road descending very gradually the whole way over the slope from the foot of the hills. At Nangumbaz we joined the direct post road from Theran to Yezd *viâ* Kashan. There is a good caravanserai of Shah Abbas, a chaper khaneh or post house, and a kaleh or walled enclosure, but no village. The water is salt, and there is almost no cultivation, only a few rayats living in the kaleh. Some ruins of former buildings are to be seen near the caravanserai. Bearing of Bambiz sugarloaf peak 277½°.

14. *December 24th.*—Started from Nangumbaz at 8-20; weather very cold and cloudy. Rode over twelve miles of flat, gravelly desert to a newly-built tank of rain-water which bore the inscription inside "Ya Ali! Aml Hassan Akdai." After halting here a short time for breakfast we continued our journey over a very similar country, passing

four miles from the tank, the new caravanserai and kaleh of Tschah Nan or "new well," and seven miles farther the village of Sheherabad, about three miles from Akda, where we halted for the night. Distance from Nangumbaz twenty-six miles. The road is over a flat desert the whole way until within a few miles of Akda, where the ground is much cut up with watercourses and kanats. It began to snow when we were little more than half way, and by the time we arrived at Akda the ground was covered. Akda is a small walled town of somewhat picturesque appearance, provided with a good chaper khaneh and a new caravanserai.

15. *December 25th*, CHRISTMAS-DAY.—Marched from Akda to Myboot, distance thirty-one miles. On starting in the morning had some difficulty in finding our way as the whole country was covered with snow. Four miles from Akda we passed on our left the village of Shemsabad, containing some twenty or thirty houses, and three miles farther on a small tank where a road branched off to our left. Two miles from the tank another road leads at an acute angle to the right. Twelve miles from Akda we arrived at the ruined caravanserai and deserted chaper khaneh of Chafta, where we breakfasted and took the following bearings:—

Bambiz sugarloaf peak	300°
Corner peak of Akda range, distant about eight miles	195°

The road from Nangumbaz to Chafta is over an extensive plain, with the Akda range about eight or ten miles to the right, and high hills some twenty miles to the left. For the first six miles from Chafta the road is level as before, and then crosses some undulating ground with prominent low hills to the right which stand isolated in the middle of the plain. Some nine miles from Chafta a road branches off acutely to the left leading in the direction of the small town of Bafru, about four or five miles from Myboot. From the

point of bifurcation the road is flat and good until within four miles of Myboot, whence, after passing a kaleh on the left and some low hills on the right, it goes over ground much broken and cut up with old kanats. At this part of the road the soil is well cultivated, and there are numerous gardens. About a mile from the chaper khaneh we passed an old castellated-looking village on our right called Beedeh, where the people seemed to manufacture a great many of the oval-shaped earthern pipes used for making kanats or underground canals in loose soil.

Myboot, formerly a walled town, is now only a small village, but there are many other villages in the immediate neighbourhood. The clay, like that of Nain, is well adapted for making pottery, particularly kuzehs or porous water-vases, of which a good many seem to be made here and sent to Yezd.

16. *December 26th.*—From Myboot to Hemetabad: distance sixteen miles. Bearings from Hemetabad: Akda point 310°. Point beyond Mahomedabad 143°. Prominent peak on east side of valley 80°. Shir Kuh 178½°.

Nearly the whole of the distance to-day the road lay through a succession of villages and *abadeh* with cultivation. For the first four miles, as on the other side of Myboot, the ground is very uneven both naturally and artificially. Emerging from the broken ground we passed a large village, marked by a cypress tree, about two miles to our left. Four miles from Hemetabad we passed on both sides of the road the ruins of what must have been an extensive town, and beyond it on our left a large modern village called Shemsabad. We also saw about a quarter of a mile to our right an abadeh with twenty or thirty fir trees, the only pines we had seen on the road. All this morning and yesterday the weather was cloudy and bitterly cold, but as we approached Hemetabad the heavy snow clouds began to clear off,

affording us a view of the magnificent mountain chain to our right. We could get no general name applicable to the range, but one of the highest and most beautiful peaks seems to be universally known as the Shir Kuh. Its height, I should imagine, is about 12,000 feet above the sea.

On the opposite side of the valley there is another very striking peak in the range of hills that bounds the view to the eastward.

17. *December 27th.*—Hemetabad to Yezd twenty miles. The first part of the way was along a heavy sandy road among low sandhills. Then came a little cultivation at the village of Iskyzar, and then sand again up to within five or six miles of Yezd, where we passed the village of Tifl Omar, and soon after a large village to our left, with a crenellated castle not unlike a county jail. Thence to the town we crossed a hard dry plain. Yezd is distinguishable from a considerable distance by the lofty minarets of the Jameh Musjid, and the high "badgir" or wind-tower in the governor's garden of Dowlatabad.

18. The position and appearance of Yezd are quite unlike what a glance at the maps would lead one to believe. Instead of being in an open, flat desert, it is situated in the middle of a plain about fifty miles broad, bounded by high ranges of picturesque mountains. The population probably does not exceed 30,000, of whom 4,000 are Guebres or Parsees and 1,000 Jews. A large proportion of the inhabitants are engaged in the manufacture of silk, which is said to be superior to any other made in Persia. The raw material is obtained from the villages in the heighbourhood, and we were told that large quantities were also brought for manufacture from Ghilan. This, however, I should doubt. Henna and reng for dying the hair, brought in a raw state from Minab and the neighbourhood of Bunder

Abbas, are ground and prepared for use, and exported to all parts of Persia. Sugar is also refined, and sent chiefly to Ispahan.

19. The town in itself is rather uninteresting, and contains hardly any building worthy of note. The only remarkable one is the Jameh Musjid, the principal mosque, a very old building now much ruined, the front of which, however, is still handsome. The bazaars are narrow and irregular, but well stocked with goods and crowded with people. The external trade appears to be very considerable, and the merchants of Yezd are reputed to be among the most enterprising and respectable of their class in Persia. Some of their agents have lately gone not only to Bombay but to the Mauritius, Java, and China.

20. The greater part of the town is built outside the city wall, and the governor lives in a separate fortified enclosure of his own. As in almost every town in Persia, ruins are superabundant. The inhabitants account for this, first by the Afghan invasion nearly one hundred and fifty years ago, and more recently by the rebellion of one of its governors, whose history is perhaps sufficiently interesting to be shortly related.

21. During the regin of Fath Ali Shah, in the beginning of the present century, Yezd was governed by one of his numerous sons, Mahomed Wali Mirza, who in course of years had amassed an unusually large fortune even for a prince. Called probably on this account to Tehran by his father, he left his government, his harem, and his money in charge of his vizier, Mirza Abdul Rezak, who during the absence of the prince took possession for himself of all that had been entrusted to him, raised an army, and became yaghi or rebellious. The Shahzadeh on his return from Tehran being refused entrance, brought a force and

besieged the city. After a long defence, during which the city was almost destroyed, Abdul Rezak was forced to flee, first to Kirman and then to Meshed, where he took *bust* or sanctuary in the sacred shrine of the Imam Reza. Here of course he might have remained in safety, but he was induced by Abbas Mirza, the heir apparent to the throne, to leave his refuge and throw himself at the feet of the king. Disregarding the promises of forgiveness held forth by his son, the Shah ordered the wretched Vizier to be given over to the vengeance of the harem he had dishonoured, when the women, armed with bodkins and scissors, speedily put him to an ignominious death.

24. Nothing could exceed the civility with which we were treated by the governor, Mahomed Khan, general adjutant (as he is called) of Persia. On approaching the city we were received with an istikhbal, or reception, by a large party of horsemen and soldiers headed by the governor's steward, whom he had appointed our mehmandar or host. More soldiers and ferrashes were sent to escort us through the bazaars, which were crowded with people to see the strange Feringhees. The house assigned us for a residence was the palace of the very Mahomed Wali Mirza whom I have already mentioned. Here we were entertained during our stay in Yezd by our mehmandar as the guests of the governor. We called on him twice and found, not a little to our astonishment, that he spoke French, and had visited almost every capital in Europe. When tea was brought in he remarked that as Englishmen we would no doubt prefer beer, and a bottle of "Allsopp's pale ale" was immediately set before us.

25. When we explained to him the object of our journey, he good humouredly said that if the Shah ordered a Telegraph to be set up through Yezd he would give every assistance in his power, but that as a governor we could

not expect him to have any violent desire for increasing the means of communication with the capital.

26. We had many visitors during our three days' halt at Yezd, among others the governor's vizier, the Imam Juma's brother, the commander of the troops, the Malek-i-Tadjar, or head of the merchants, the colony of Hindoos from Shikapoor, &c.

YEZD TO KERMAN.

27. The distance from Yezd to Kerman is two hundred and forty miles of good level road over a continuation of the same plain as that between Yezd and Kashan. About half way the road turns from a south-easterly to an easterly direction, the last three stages being on the road from Kerman common both to Yezd and Shiraz. The greater part of the way the country is perfectly barren and desert, although great improvements have of late years been made by the present vizier of Kerman, Mahomed Ismail Khan, better known by his title of Wakil-ul-Mulk. He has built caravanserais, and made reservoirs of fresh water in the places where they were most wanted, and has encouraged others to follow his example.

28. Details regarding the road are contained in the following extracts from diary.

29. *December* 31*st.*—From Yezd to Mahomedabad: distance ten miles. There is a good smooth road the whole way, with a slight ascent through almost continuous cultivation, and passing between the small villages of Nejefabad and Rahmetabad. Mahomedabad, where we passed the night, is a large village of about three hundred houses forming a long straight street, with houses and rows of mulberry trees on both sides.

30. *January* 1*st*, 1866.—Mahomedabad to Sar-i-Yezd: distance sixteen miles. Immedediately after leaving Ma-

homedabad the cultivation ceases, and none is seen until Sar-i-Yezd is reached. The first part of the road is a continuation of yesterday's gradual ascent until the corner of the hills to the right is passed, after which it is nearly level. Sar-i-Yezd, a considerable village with chaper khaneh and caravanserai, is, as its name implies, the boundary of the Yezd district.

31. *January 2nd.*—Sar-i-Yezd to Zein-ed-Din: nineteen miles. The road passes over a flat pebbly desert, with a little undulation four or five miles from Zein-ed-Din. Here there is no habitation but the chaper khaneh. There is a fine caravanserai partially ruined, built by Shah Abbas, of circular form, with six flanking towers. The roof is provided with a loop-holed wall, each loop-hole being arched over for the protection of the defenders. From this point to the neighbourhood of Anar the road has been subject to frequent raids of marauding Bukhtiaris from the mountains to the westward. The caravanserai of Zein-ed-Din bears the marks of having been taken by storm, and the captors have evidently done their best to destroy it. The water is very salt.

32. *January 3rd.*—Zein-ed-Din to Kermanshahan: distance fifteen miles. A very good road slightly ascending along the plain between isolated ranges of hills. Kermanshahan consists only of a chaper khaneh, a kaleh, and an excellent caravanserai built about two years ago by the Wákil-ul-Mulk. The kaleh is occupied by a few Tufangchis (matchlockmen) placed here to guard the road. Bearing of point of Yezd hills near Mahomedabad 316°.

33. *January 4th.*—Kermanshaan to Shems: distance 17½ miles. The first seven miles slope upward over a stony road to a spur of dark hills, after crossing which the road, by a short descent, again reaches the great plain, where the chaper khaneh and kaleh of Shems are situated. Near

Shems there is a very prominent peak, seen from a great distance, on the Kerman road. The chaper khaneh we found without doors and deserted, and the gateway of the kaleh, in which were a few Tufangchis, broken in, the effects of a recent visit of the Bukhtiaris.

34. *January 5th.*—Shems to Anar : distance twenty-three miles. The road, although in some parts sandy and stony, is generally good, but passes over a perfect desert in which not even a trace of camel-thorn is to be seen. Near Shems the ground is undulating, but the rest of the way level. Far away to our right was a range of low snowy hills (Nar Kuh) running nearly E. and W. ; rugged in appearance, and resembling the upper part of a grand mountain chain. Anar is a large village with a mosque, a new caravanserai, and a chaper khaneh, and is supplied with water by means of kanats from the Nar Kuh range.

35. *January 6th.*—Anar to Beyaz : distance eighteen miles. Bearing from Beyaz of Shems peak 308½°. For the first four miles from Anar, as far as an Abadeh on our left, called Daondabad, the ground was irrigated by kanats and cultivated, but the rest of the way there was the usual desert. For the last four miles the road was very stony, and slightly ascended to Beyaz, a village containing forty or fifty houses. About a quarter of a mile from the village are the chaper khaneh and a caravanserai in course of erection. To-day we saw to our left front the high Dawiran hills covered with snow, beyond which Kerman is situated.

36. *January 7th.*—Beyaz to Kushkuh : distance eighteen miles. The whole way there is the same flat plain, bounded right and left by the same lines of hills. The soil here is light and sandy, and pretty thickly covered with *botta* or camel-thorn, used when dry as firewood in most parts of Central Persia. We saw the remains of old kanats,

and found some men at work excavating a new one. About half way we passed a village a mile to our right, and another on the road, three miles from Kushkuh, with a kaleh, called Aliabad, where there was a good deal of cultivation. Kushkuh is a small village with good water and well cultivated ground, a kaleh, a new caravanserai, and a chaper khaneh. Bearing of Shems peak 312°; of point of Dawiran range 104°.

37. *January 8th.*—Kushkuh to Bairamabad: distance twenty-six miles. The first sixteen miles are over a sandy, lumpy road, the plain on both sides covered with tamarisk shrubs and camel-thorn. The rest of the road is good. The plain here is about forty miles broad, with the road nearly in the middle. Four miles from Kushkuh we passed some ruins; at eight miles a small village to the right called Daveh, at sixteen miles the villages, first on the right, of Hooseinabad, second on the road, Hormuzabad, and third on the left, Dehenabad and Mehdiabad. These small villages, all very near each other, are surrounded with cultivated ground, and probably contain collectively about one hundred houses. Between them and Bairamabad we saw a good many kanats, and extensive cultivation as we approached the end of the march. Bairamabad is quite new, owing its existence to the well-directed energy of the Wakil-ul-Mulk. Where ten years ago there was nothing but a chaper khaneh in the middle of the desert there is now a town of at least 1,000 well-built houses, the centre of a circle of a cultivation seven or eight miles in diameter, and well supplied with water. Bazaars are springing up in the town; there is even a yakhchol or ice-house, and the whole place wears a thriving aspect. The chaper khaneh is very good, and there is a caravanserai lately built by a Kerman merchant. Two or three miles to the north are the ruins of the former Abadeh of Kaleh Aga, which was destroyed some fifteen years ago by

a torrent during the sudden melting of an unusually heavy fall of snow. Bearing of Shems peak 303½°.

38. *January 9th.*—Bairamabad to Kebuter Khan : distance twenty-six miles. Road as before over a level plain. The first five miles are through the well-cultivated district of Bairamabad, near the extremity of which we passed the village of Abdulabad. This is succeeded by eighteen miles over a pebbly desert, with sparse patches of camel-thorn, and the last three miles are through soft heavy sand thickly covered with large *botta*. Kebuter Khan (so named perhaps from an old pigeon-tower) is a small village containing about forty houses, an old caravanserai recently repaired, and a chaperkhaneh. The present village appears to be nearly new, the old one, close by, being ruined and deserted. Throughout to-day's march we have seen straight to our front the high snowy hills beyond Kerman. Bearings : Shems peak (indistinct) 282° ; point of Dawiran range 62°.

39. *January 10th.*—Kebuter Khan to Baghin : distance thirty miles. Fourteen miles from Kebuter Khan over flat plain of hard, light coloured sandy soil with almost no vegetation, we reached Robat, an excellent caravanserai and tank of fresh water recently built by the Wakil-ul-Mulk. The caravanserai is solidly built of hard burnt bricks and lime, has good rooms *fitted with doors* (the only instance of such a luxury I have seen in Persia), and a spacious belakhaneh for the use of travellers in summer. Near the caravanserai there is a small village and a little cultivation. At Robat the valley contracts, owing to a separate range of hills nearly parallel to the road that here springs up on the right. From Robat to Baghin the road slightly rises over a somewhat more stony desert, passing on the right about four miles from Baghin the small village of Saadi. Baghin is now a village of sixty or eighty houses, although the

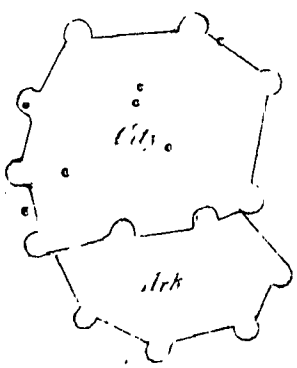
numerous ruins with which it is surrounded testify to its greater importance at a former period. There are a few trees, and evidently abundance of kanat water, although but little cultivation. The caravanserai, which is a very good one, was built about ten years ago by Hajji Mahomed Ibrahim, a Kerman merchant, the same who built the caravanserai at Anar, and left money to erect the one now in course of construction at Beyaz. Baghin is also a chaper station.

40. *January 11th.*—Baghin to Kerman: distance nineteen miles. Somewhat to our astonishment we found Baghin actually to the southward of Kerman, which quite accounts for the mistake made in the maps. In most of them the roads to Shiraz and Yezd are marked as quite distinct, whereas for the first three stages they are one, and only separate at or near Kebuter Khan. The maps have evidently been drawn from verbal report, as the three names of Baghin, Robat, and Kebuter Khan, with slight variations of spelling, occur on both roads. Four or five miles from Baghin the road, after a gradual ascent, rounds the point of the Dawiran range, from which it descends into the plain of Kerman, leading to the city in an E.N.E. direction.

41. Three or four miles from the town we were met as at Yezd by an istikhbal sent by the vizier, the Wakil-ul-Mulk. A comfortable house was assigned us next to his own, and a mehmandar appointed to attend to all our wants.

42. Kerman is situated in an extensive plain, but in the immediate vicinity of very lofty mountains. A glance, however, at the accompanying map will show its position better than any description. The climate is said to be excellent, neither very cold in winter nor hot in summer. Its height above the level of the sea I should estimate at about 5,000 feet. The city in many places is a mass of

ruins, caused, I believe, by the civil war on the accession of Agha Mahomed Khan, the first of the Kajar dynasty. Kerman, like many other places in the south of Persia, followed the fortunes of Lutf Ali Khan, the representative of the Zend family. After a gallant defence Kerman was taken and almost destroyed by Agha Mahomed Khan, into whose hands Lutf Ali Khan also soon after fell not far from Bam. Much has, however, been done within the last seven years by the Wakil-ul-Mulk to restore the city. The walls have been repaired, new gates have been built, and inside the town bazaars and caravanserais are in course of erection. On the southern side of the town is the ark or citadel in which the governor resides. It forms a complete enceinte in itself, although the inner wall of the ark is also the city wall; thus—



43. The nominal governor or hakim of Kerman is a young prince, Kei Omers Mirza, son of Kahriman Mirza, governor of Tabreez, the brother of Mahomed Shah, and son of Abbas Mirza, the son and heir apparent of Fath Ali Shah. His rule is, however, purely nominal, the actual power being entirely in the hands of his vizier, the Wakil-ul-Mulk, on whom the king has recently conferred the additional title of Sirdar of Beloochistan. The Wakil is one of the most

remarkable men in Persia. During the seven years that he has been vizier of Kerman he has done a great deal to improve the province over which he rules. Although upwards of sixty years of age, he spends a great portion of every year in travelling about, and seeing for himself the state of the more out-of-the-way parts of his government. As he told us himself, he carries on an extensive trade with India on his own account, applying the gains he realises to building caravanserais, &c., and bringing desert land under cultivation. His style of trading would be looked upon as very tyrannical in any other country, but it may well be pardoned in Persia, where the governors as a rule use the rude expedient of actual force to extort a revenue for the government and themselves. His system is this. When *koork*, the material of which shawls are made, and one of the principal productions of Kerman, is in great demand at Umritsur, he allows no one to purchase and export it but himself; but when prices fall he immediately proclaims the principle of free trade. He was therefore no doubt sincere when he told us with great emphasis, "*Tidjaret bisiyar khubast*"—"commerce is a very excellent thing." He received us in the most cordial manner, and seemed really glad to see us, throwing quite aside the punctilious etiquette so universal in Persia. He was full of humerous anecdotes of what he had seen and heard, and seemed to retain a very kindly remembrance of Sir John Malcolm and the members of his mission. He told us how he had been sent as a small boy with a message from his father to the Elchi, and how the great man had taken him on his knee, talked to him in Persian, and sent him off immensely delighted.

44. During the four days we remained at Kerman we went to see the carpet and shawl factories. The carpets are the finest in Persia, and the shawls are considered next in value to those of Cashmere. Both are made entirely by

hand, without the use of even a shuttle. In making the carpets the threads (all of one colour) forming the length of the web are stretched on an upright loom consisting of two horizontal rollers. The cross coloured threads that form the pattern are worked in by as many small boys as the breadth of the web will allow to squat in front of the loom. As the work progresses the web is gradually rolled up on the lower roller. After every two are three rows have been worked wide-teethed combs are inserted in the woof, and hammered down with a mallet to make the carpet close and firm. The master-weaver draws and colours the designs on paper, ruled to represent the different threads, after which he teaches the pattern to the pupils, who commit it to memory. The shawls are woven in a similar manner, almost the only difference being that the looms, or rather frames, are horizontal instead of upright. The memory of the workmen cannot possibly be assisted by seeing the pattern develop itself, as they always work with the reverse side of the web upwards. The kharkhanehs or workshops in which the weaving is carried on are such low, dark, miserable rooms, that one cannot but wonder that they should produce such beautiful manufactures. The shawls vary in price from five to fifty tomans (Rs. 230), and fine carpets cost as much as from four to ten tomans the square yard. Very few of the finer sort are made for sale in the bazaars, almost all being made to order for grandees in all parts of the kingdom. As in the matter of koork, the Wakil-ul-Mulk does a good deal of "tidjaret" on the same principle in shawls and carpets. The spinning and dying of the wool for the carpets and the koork for the shawls are also carried on in Kerman, which thus produces the raw material and completes its manufacture.

45. The external trade of Kerman is much less than that of Yazd. The chief exports are koork (which is sent by Bunder Abbas and Kurrachee to Cashmere), wool,

carpets, and shawls, cotton to Bombay, and grain to Yezd, which does not produce enough for the support of the inhabitants. The imports are chiefly cotton goods, sugar, copper, &c. from India. Once or twice a year caravans come from Seistan and Kandahar.

46. There are few gardens near the town, but abundance of fruit is brought from Khubbes, a beluk or district fifteen farsakhs (sixty miles) to the N.E. : wrongly marked on the maps as fifteen days' journey.

47. A mile or two to the east of the city is the ancient Guebère stronghold called Kaleh Dokhter, or the maiden fort, built on a high rock. We were unable from want of time to visit it.

48. Our intention was to have separated at Kerman, but as we found that the direct road to Bunder Abbas was quite impassable on account of the snow, I was obliged to go by a somewhat longer road to the eastward, five marches of which were by your road to Bam. We therefore went together as far as Sabristan, where the road to Bunder Abbas branched off to the southward. The road from Kerman to Bunder Abbas is very similar, as was to be expected, to that from Shiraz to Bushire. On each the descent to the plain near the sea is made by two steps with a strip of level country between, the only difference being the distance, which is twice as great from Kerman as from Shiraz. The descent from Deh Bukre to Giroft corresponds to the Kotul Pirizan and Kotul Dokhter, the plain of Giroft to that of Kazeeran, the pass of Nuveergu to that of Daliki, and the plain of Bunder Abbas to that of Bushire.

49. Furnished with letters and guides from the Wakil-ul-Mulk, we left Kerman on the 15th of January and marched to Mahun, a distance of twenty-three miles in a

general S.S.E. direction. For the first four miles there were many ruins on the cultivated ground near the city. The rest of the road was over a sandy desert gradually ascending to Mahun, a straggling town of some 1,500 houses surrounded by gardens. It contains the tomb of Shah Niamut Ullah, a great saint and prophet, to whose shrine many pilgrimages are made. The tomb itself is in a handsome domed building, erected, we were told, by Akbar Shah of India. As a sort of anti-chamber to this there is another hall equally handsome and elaborate, built by Shah Abbas. The gateway into the outer enclosure was built by Mahomed Shah, and in the present reign the Wakil-ul-Mulk has repaired and enlarged the house on the opposite side of the road appropriated to the use of the pilgrims visiting the shrine. In this house we put up for the night, and in the morning were shown over the whole building by the resident derwishes. We were told, as a current tradition regarding Mahun, the well known classical legend of the extent of ground covered by a bullock's hide. Shah Niamut Ullah in the course of his wandering as a derwish came to Mahun. Thinking it a pleasant spot in which to pass the remainder of his days, he begged the proprietor to give the poor derwish a corner to beg on—only as much as a bullock's hide would enclose. This request being granted, he cut the hide into fine thongs, and enclosed the whole place. According to the old derwish, who is hereditary guardian of the shrine, Shah Niamut Ullah died 570 years ago.

50. *January 16th.*—Mahun to Khanakeh : seventeen and a half miles. The road sloped gradually upward, turning more to the southward, and entering the hills on the right by a ravine, both sides of which were covered with snow. A short distance up the ravine we reached Khanakeh, a small caravanserai in the middle of the hills lately built by the Wakil-ul-Mulk.

51. *January 17th.*—Khanakeh to Rayin: twenty-six miles. For the first six miles we rapidly ascended over the snow to the crest of the hills, about four miles beyond which we descended to Kaleh Shur, a small caravanserai, or rather stable, hardly above the level of the ground. A mile or two below Kaleh Shur we cleared the hills, but continued to descend over an even glacis slope until within four miles of the end of the march, when we suddenly turned to the right over some low hills and across a narrow plain to Rayin, situated on a slight eminence under a lofty snow peak called the Shah Kuh. From near Kaleh Shur we had seen in the distance, and nearly straight ahead, the high snowy range of Deh Bukri and Sarbezan. Rayin is a small town of five hundred or six hundred houses, the residence of the Zabit, or governing agent of the country as far as Sabristan. We found on our arrival at Rayin that we were considered as guests of the Wukil-ul-Mulk, the Zabit providing us with everything, and not allowing us to buy anything for ourselves.

52. *January 18th.*—Obliged to halt at Rayin on account of a snowstorm which lasted all day.

53. *January 19th.*—During the night it blew a perfect gale, with heavy rain which melted the snow that fell yesterday. Marched from Rayin to Tehrood, thirty-three miles. For the first fourteen miles we followed the direct road to Sabristan, then crossing to our left a soft keveer or desert, in which the horses sank at nearly every step above the fetlock, we entered the half dry bed of a river, along which we wound our way among low hills till we reached Tehrood. Tehrood (lit. the bottom of the river) seems to be the name of a small district rather than of any village in particular. It contains a few scattered hamlets of four or five houses each, and a large mud caravanserai in which we passed the night.

54. *January 20th.*—Tehrood to Sabristan: twelve miles. After passing through about two miles of cultivated ground we crossed the Tehrood river, flowing eastward, and ascended by some low earth hills to the general level of the plain in which Sabristan is situated. On the bank of the river, a mile or so to our right, we saw the ruins of an old castle, which we were told had been the scene of many a fight. The day was misty and drizzling, and the country along our road looked the very picture of desolation. Sabristan, like Tehrood, is the name of a small district of cultivation. There are two caravanserais close to each other, in the larger of which we put up for the night.

55. *January 21st.*—My road diverging from yours at Sabristan, we separated this morning. I marched to Deh Bukri, distant twenty-two miles. Soon after leaving the caravanserai the road rounded a point of the hills to the right, and thence led nearly straight up a long slope of undulating stoney ground to the mouth of the Deh Bukri pass. Shortly before reaching the hills I entered the bed of a stream running down to the plain, which I followed up nearly to the end of the march. The ground as I ascended became covered with snow, and the weather bitterly cold. Four miles above the mouth of the pass I came to the small village and valley of Deh Bukri, inhabited in summer but deserted in winter. At the further end of the valley, about four miles beyond the village, I halted for the night in a small underground stable called a caravanserai, the floor of which was deep with mud and half-melted snow. The hills all round were covered with dwarf oaks, and the bed of the stream which I had followed filled with oleander and other shrubs.

56. *January 22nd.*—Marched sixteen miles among the hills to a spot where I bivouaced for the night. After two miles over very deep snow from the caravanserai I reached

the top of the pass, from which I continually descended for the rest of the march. Two miles down, or four from where I started, I passed the small caravanserai of Sakhtdar. The two caravanserais are evidently built so near each other to afford shelter to travellers who may be unable to cross the ridge during heavy snow-storms. The mountains on both sides of the road are exceedingly picturesque. In spring and summer they afford excellent grazing ground for the Eliant tribes now encamped on the plains below. Just before halting I crossed a considerable mountain stream flowing to the westward.

57. *January 23rd.*—During the night it rained in torrents, which made a bivouac in the open without shelter the reverse of agreeable. From the place where I had halted I continued to descend for about fourteen miles to the plain of Giroft. These fourteen miles one might divide in three parts:—1*st*, a steep descent of four miles through rocky defile; 2*nd*, a more gradual one of five miles through a wider passage among the rocks; and 3*rd*, four miles still more gradual over an open slope from the foot of the hills to the banks of the Roodkhaneh-i-Shoor. On reaching this river I found it so swollen as to be quite unfordable. I therefore followed it down to the eastward, where its bed seemed to spread out and separate into several channels. After riding ten miles along the bank I halted for the night at a small Belooch village of reed huts called Dasht-i-Kushk in the Jemalbaraz district. The chief of this beluk, Gholam Hussein Khan Belooch, lives at the fort of Do Sareh, ten miles further down the river.

58. *January 24th.*—Dasht-i-Kushk to Kerimabad, the residence of Mahomed Ibrahim Khan, governor of Giroft: distance twenty miles. In the morning got some of the villagers to guide me across the Roodkhaneh-i-Shoor, which was divided into twenty or thirty channels straggling over

a total breadth of about three miles. Three miles further on, or six from Dasht-i-Kushk, I came to the village and kaleh of Serjaz, the property of the Wakil-ul-Mulk, situated about midway between the Shoor and Halil rivers. The passage of the latter was somewhat difficult, the water being deep and the stream rapid. Both rivers, I was told, are frequently quite impassable in spring during the rapid melting of the snow. Clumps of date palms growing near the villages showed that I had now reached a totally different climate. From the Halil river I crossed a soft muddy plain covered with jungle to some low hills on the side of which was the village of Kerimabad. Here I was met by an istikhbal from the Khan, who received me at his tents in the most kind manner possible. He would not hear of my continuing my journey at once, but insisted on my staying at least a couple of days with him, which I did. Nothing could exceed his kindness and hospitality. The day after my arrival we went out shooting and hawking in the jungle, when he showed himself a most skilful sportsman both with the gun and the hawk. Although shooting from horseback he rarely missed a black partridge on the wing. His hawks, trained by himself, were the best I had seen in Persia. The whole of the surrounding country belongs to himself. He seems to live a very pleasant patriarchal life, and never goes away even to Kerman. He is himself a Persian, the grandson by the mother's side of Fath Ali Shah, but the rayats are for the most part Beloochees.

59. To the S.E. of Giroft lies the district of Roodbar, the property of the late Seyyid Khan, who, I was told, was the chief instrument of the Persians in taking possession of the rest of Western Beloochistan. Roodbar, so named from *Rood* a river, is the name given to the country below Giroft on each side of the Shoor and Halil rivers which unite not far from Kerimabad.

60. On leaving Giroft, Mahomed Ibrahim Khan most kindly sent a trustworthy man to conduct me to Bunder Abbas, and gave me his own mules to carry the baggage. He also wrote to Nur-ed-Din Khan requesting him to send one of his own men to escort me through the portion of his country over which my road lay. I afterwards found that he had also sent men a day in front to get halting-places, forage and provisions ready for me as far as the boundary of Fars. He in fact did everything in his power to make my journey safe and comfortable.

61. On the 26th I took my leave and started, accompanied the first stage by four huntsmen to provide me with a sufficient stock of game for the first half of my journey. The road lay over a flat plain covered with low jungle, jujube and tamarisk trees. I halted at Kugu, a small village of reed huts, fifteen miles from Kerimabad.

62. *January 27th.*—Kugu to Wakilabad: thirty miles. The road was like yesterday's over the plain of Giroft, but the jungle became thinner as I advanced. Four miles from Kugu a road branched off to the left leading to Dehnoo, the castle and residence of the late Seyyid Khan, three days' journey to the southward. I soon after passed on the left the villages of Genjabad, Samali, and Beluk Khosro, where the rayats turned out to "istikhbal" me. About nineteen miles from Kugu the ground was strewed with fragments of old bricks, probably marking the site of an ancient city. Near this I passed on the right the well-watered village and date plantations of Dehnupancher. Wakilabad, where I halted, is a village lately brought into existence by the Wakil-ul-Mulk, whose name it bears.

63. *January 28th.*—Wakilabad to Gulashkird: twenty-one miles. Road similar to yesterday's to within five miles of Gulashkird, where I entered some low hills at the village of Khadirmah. For three miles I followed the bed of a

stream of fresh water, the banks of which were covered with date trees. Then turning to the left for two miles I reached the castle and large reed village of Gulashkird, the property of Nur-ed-Din Khan. It stands on an eminence near some bare rocky hills, and overlooks an extensive plain in the direction of Bunder Abbas.

64. *January 29th.*—Gulashkird to Roodkhaneh-i-Duzdi (Robbers' river) : nineteen miles across the plain, overlooked by Gulashkird. This plain is flat and sandy, with a thin sprinkling of jujube and tamarisk trees. Roodkhaneh-i-Duzdi, at which there is a small village and a large half-ruined fort, with a good ditch, is the boundary of the provinces of Kerman and Fars, a corner of the latter of which here projects to the eastward between Kerman and the Bunder Abbas district. The river, flowing to the eastward, is, I believe, the same that reaches Minab.

65. *January 30th.*—Roodkhaneh-i-Duzdi to Godar Shooran or Godar Rahdar: fifteen miles. After crossing the river I gradually ascended over hilly ground and dry beds of streams to Godar Shooran, where there were four or five small huts. About half way I passed a square open tank of fresh water by the side of the road. Within a mile of Godar the road to Minab branches off to the left.

66. *January 31st.*—Six hours and a half on the road from Godar Shooran to an Eliant camp, at which I halted, under the Kuh-i-Nehyun, nearly the whole way over a most difficult mountain pass. Six miles gradual ascent from a small stream, which I crossed near Godar, brought me to the Watershed, from which I at once began a steep, rocky descent over which it was impossible to ride. Six miles down I passed a small date plantation called Nevergoo, which gives its name to the pass. From this point the road after a sharp descent followed the bed of a considerable stream, the Zinyum river, until I got clear of the hills, and

emerged on a stony plain crossed by the beds of numerous mountain torrents. In this plain about six miles from the foot of the hills I halted.

67. *February 1st.*—All last night and to-day it rained so heavily that I was unable to move either forward or backward on account of the impassable torrents that poured down from the hills on both sides of me. We had no forage for the horses and mules, and the Eliants had no food to offer us but dried locusts. I spent consequently rather an anxious day, afraid that if the rain continued our animals would starve. During the night, however, it cleared up, and I was enabled to start again the next day.

68. *February 2nd.*—Eliant camp to Takht-i-Kushkuh: twenty miles. Two miles from the camp we came to the Sulu Bálm, a large river flowing round the base of the Kuh-i-Nehyun, which we had some difficulty in crossing. As the usual road passes along its bed we were obliged to scramble over the hills on the right bank to the village of Nehyun, after which we had a good road through a well cultivated district to the small town and ruined castle of Kushkuh. Ten miles further on, the road passing through continuous cultivation, I arrived at Takht-i-Kushkuh, a town with extensive date plantations containing about 1,500 houses.

69. *February 3rd.*—A long march of thirty-nine miles over a most uninteresting plain from Takht-i-Kushkuh to Bunder Abbas. I crossed some streams which I believe all dry up in summer, and passed a few insignificant villages of reed huts.

70. On reaching Bunder Abbas I found that Mr. Johnston had arrived from Bussorah. We remained here till the 7th when we embarked on board the *Amberwitch*, and after visiting Angaum and Mussendom, landed at Cape Jashk on the 11th.

71. Regarding the part of Mekran we traversed together, it is quite unnecessary that I should do more than refer you to Mr. Johnston's report, a copy of which I enclose.

72. It may be advisable, however, to make a few remarks on the general feasibility of constructing a line of telegraph by the route I have so imperfectly described.

73. From Ispahan to Kerman there would be no difficulty whatever. The country, except for a few miles over the low hills at Laghereh, is level and the roads good. Iron posts, however, would be necessary as no wooden ones could be obtained. From Kerman to Bunder Abbas viâ Giroft the construction and maintenance of a line would be much more difficult. The mountain passes of Deh Bukri and Nevergoo offer many obstacles, and the difficulty of maintaining a line in the sparsely populated plains would be considerable, especially in the summer when the heat is excessive. Another objection to this road is that although at present tranquil and safe under the strong rule of the Wakil-ul-Mulk, it might not continue to be so under his successor, the majority of the population between Giroft and the lower plains being Beloochees. The distance too, 380 miles, is great. These difficulties are probably not insuperable, but I think that in the event of the project of a line of telegraph being entertained, the other and more direct road from Bunder Abbas to Kerman should be examined. Although the mountains near Kerman were impassable on account of snow when I came by Giroft, I was told that the length of road thus blocked up was not greater than fifteen or twenty miles. If therefore this road should prove preferable in other respects, I think the difficulty of the snow might be got over by making that portion of the line of very strong steel wire slighty stretched on short stout posts. The signals would pass perfectly well as long as the wire was unbroken, even if it should be buried in the snow.

74. But there is still another road, and one that would most naturally suggest itself to any one simply looking at the map, viz. the direct route from Bunder Abbas to Shiraz. The objections to this route are that part of the intervening country is said to be half independent and generally in a disturbed state; and secondly, that the Persian government would probably not care for having a line that only added so insignificant a place as Bunder Abbas to the towns in Persia already in telegraphic communication with the capital. This road, however, should also, I think, be examined before a decision is come to as to the precise route to be followed.

75. At present I am inclined to believe that the best of the three is the direct road from Bunder Abbas to Kerman, especially as it must be eighty or one hundred miles shorter than the other by Giroft. And if proper measures were taken for guarding and patrolling the line, I believe there would be no physical difficulty in the way that could not be overcome.

76. When at Bunder Abbas I was much struck with the weak hold the Arabs seemed to have of the country. While I was there a Persian Shahzadeh, who had come without followers from Shiraz, wrung five thousand tomans from the Sheik by mere threats. There is no force in the place, and the Arabs appear to be in it only on sufferance. The Persians, I have little doubt, find that they get more revenue by farming the territory to Muscat than by holding it themselves. The Persian and not the Arab flag is flown over the residence of the governor.

I have the honour to be, &c.

R. M. Smith, Major, R.E.,
On special duty.

P.S.—I enclose a tracing of a rough map of our route from Ispahan to Bunder Abbas and Chonbar.

From W. P. JOHNSTON, Esq,
British Agent at Busreh,

To Major R. M. SMITH, R.E.,
On special duty, Bombay.

Bombay, 2nd March 1866.

SIR,—I have the honour to submit the following remarks on the country between Jashk and Sooruf on the southern coast of Beloochistan.

2. Jashk is a village in the middle of a plain, probably six miles by four, surrounded by sandhills. About twelve miles to the eastward of Jashk a low sandstone spur of the range known by the several names of Bawari Bun, Daragh Reegh, and Jebel Eubzali crosses the path which passes through a gap at an elevation of forty or fifty feet from the level of the plain. With this exception the road between Jashk and Sooruf, a distance of sixty-seven and a half miles, is over a flat, uninteresting and generally desert strip, varying in width from one to fifteen miles between the above-named range and the sea.

3. The road passes through the villages of Gabdoo, Sooti, Yekdar, and Gabri. To the south of the road are the villages of Mukhsa, Cheykaloo, Demeel, Lash, Derajgwur, and Daghamiz, and between the road and the hills those of Heyleroo, Khujdan, Kharghooshki, and Hone. The villages of Yekdar and Gabri contain probably one hundred and fifty families each, and the others from four to ten, who cultivate little plots of ground, and tend the groves of date trees with which their huts are generally surrounded.

4. The dry beds of the Heyleroo, Kargenny, Shahrinou, and Karadong and other mountain torrents cross the track, besides the Jagheen, Gabri, and Haymen rivers, the

two former of which were rapid streams fifty yards wide and three feet deep, with banks about twelve feet high. The Haymen was about twenty yards wide and two and a half feet deep. We were informed that for a day after heavy rain these three rivers and some of the others were impassable, and that they sometimes overflow their banks. They are all dry in the summer and autumn, but water is procured from wells sunk two or three feet in their beds moderately good; fresh water is procurable from wells sunk anywhere along the road. The Jagheen river derives its source from the Bashakird mountain, and flows into the sea through two outlets, viz. Khores Noketerash and Naijyai. The outlet from the Shahrinou river is known as the Khore Lash, and that of the Gabri as Khore Cashani. We crossed a salt-water creek called Khore Bersha, but it does not appear to be the outlet of any river.

5. The land is sandy and barren, except in the immediate vicinity of some of the rivers, where it seemed to be tolerably fertile, and there was a considerable quantity of grass close to the flowing streams. For two or three miles on both banks of the Jagheen and Gabri, tamarisk, acacia, and jujube trees were abundant, besides a stunted willow called shemyl, and a tree called zeerak, on the leaves of which and on several kinds of shrubs camels feed. The trees are so crooked and gnashed that but very few of them could be used for telegraph posts. We saw some patches of wheat and barley, and were told that millet, Indian corn, beans, vetches, and cotton were occasionally cultivated, but in quantities sufficient only for home consumption. In years when the rain has not been sufficient to develop the crops the people are reduced to living on roots, grasses, &c., as there is but very little artificial irrigation other than mud bunds to catch rain-water. We tasted several of these grasses and found some of them excellent, but they cannot be very

palatable in summer when dry. The following are the Beloochee names of those we tasted :—

Shimsh.....A trefoil, eaten boiled.

Haweedthug. A plant like small asparagus, eaten raw, very good.

Goreempa.... A tasteless weed, large leaf and long stem, eaten boiled with butter-milk.

Gastig..... A plant with nettle-shaped leaf, flower like groundsel, eaten boiled.

Halekoo .... A thistle, eaten raw, very good, taste like lettuce.

Salemogh .. A red-stemmed plant with light-colored leaves nearly round, eaten raw, very good.

Dashuk ....A kind of small carrot, tastes like fresh cocoanut, sometimes boiled, but generally eaten raw.

6. The population is sparse and miserably poor. The sandhills which cover a portion of the land, and the want of energy or ability to utilise the rivers for purposes of cultivation, may partly account for this, but the periodical raids of Persian-Beloochees from Bunpoor, who sweep off all the animals and property they come across, are doubtlessly the chief cause. The country from the spur twelve miles east of Jashk to Sooruf was last plundered by the Persians under Ibrahim Khan of Bunpoor some three years ago, and another visit from the same quarter was expected when we passed. There seems to be a fair number of camels considering the evident poverty of the people. Of other animals we saw but few. The following are the prices at which they are sold :—

Camels—from	15	to	60	dollars	each
Sheep,	„	¾	„	2	„	„
Goats	„	¾	„	2	„	„
Donkeys	„	8	„	20	„	„
Cows	„	20	„	80	„	„

Notwithstanding the number of camels about the villages, there appears to be hardly any traffic or communication. We met no laden animals whatever, and only two men mounted on camels, on the march from Jashk to Sooruf. The people get their supplies of calicoes, &c. from pedlars who occasionally come from Muscat and Minab. A few small boats from Muscat bring dates for sale (as those produced in the district are not sufficient), and purchase from the villagers the leaf of a shrub called "peetch," which appears to be plentiful in the hills. This leaf is not unlike the date leaf, and is used in the manufacture of mats, bags, &c. This seems to be the extent of the external trade. No duties are levied on imports or exports, and there are no taxes other than the tithes on produce, &c.

7. There appears to be a lack of hospitality amongst the Bloochees we saw. Instead of a crowd collecting round us when we encamped at the two largest villages (Yekdar and Gabri), and the matter-of-course hospitality received by strangers on their arrival at the smallest collection of Arab huts, the people seemed to avoid us, and allowed even their chief, Abd-en-Nebi, to bivouac in the open.

8. Though Beloochee was the general language used, we found a few men who spoke Persian and Arabic at all the places we visited.

9. Almost every Beloochee we met was heavily armed with sword, shield, matchlock, and hatchet. We saw but few pistols and no spears.

10. There is no variety of habitation along the coast we visited. An egg-shaped reed hut, 10 feet by 5 by 5,

seems to meet all their wants. With the single exception of a half-ruined mud fort at Jashk we saw no attempt at building of any sort or kind.

11. It struck me that there was an absence of clannishness or unity amongst the members of the same Belooch tribe, and I should think this is the reason why the separate communities fall an easy prey to the aggression of chiefs who manage to muster a few hundred armed men. It appears that a part of a tribe settled in one district does not resent an injury done to a portion of the same tribe in another, and that each community must protect itself. From the fact of the members of a tribe in different places belonging to different sets, I should think it probable that some of the larger tribes in Lower Beloochistan represent the remains of confederation of small tribes that may have been formed to resist oppression in days gone by, but which now merely retain the names the confederations were known by. Some portions of these tribes prefer to use local or family names to what I suppose to be the original names of the confederations. The want of intelligence and absence of tradition among the Coast Beloochees rendered it impossible to ascertain anything of their former history, but there is one well known instance of difference of faith in the section of a tribe inhabiting different districts. Most of the inhabitants of the Bashakird district in Persian-Beloochistan belong to the Rais tribe and are Shias, whereas the Rais in the Biaban and Mihan districts are Sunnis. There are probably 3,000 of the Shahozai, 1,000 Hote, 1,500 of the Shaik, 600 of the Jangizai, and a few of the Bajakzai and Kopeish tribes in the Biaban districts, and communities of the same tribes are scattered about Bahoo, Kelat, Tumb Saih, and other parts of Beloochistan which have no claim on each other for military assistance in the hour of need. Arabs of the same tribe acknowledge the right of any portion or community thereof

to demand the cooperation of the whole wherever they may be, and to this custom probably may be ascribed the longevity of some of the more powerful tribes. But though this generally holds good, confederations of Arab tribes generally fall through when the object which called them into being ceases to exist.

12. The Arab hold on the Biaban country seems to be very slight. There were three or four Muscat Arabs at Jashk in the employ, I believe, of the chief of that place. It suits the Biabanis' purpose to acknowledge the ruler of Muscat as he takes so little from them, but they know and care but little about him, and expect no protection from him against the Persians. Indeed if he were fighting the Persians I imagine they would remain passive, and if obliged to act would join the Persians as being the stronger. They regard the Arabs with indifference, but detest and fear the Persians. The whole of the Biaban district, the coast line of which extends from somewhere between Minal and Kostak to Sooruf, is farmed from the ruler of Muscat by Meer Hussein wulud Meer Hajee for 790 tomans (about Rs. 3,400) per annum. The Jashk-Sooruf portion subscribes nothing towards this, and the chief of Jashk is allowed by Meer Hussein to keep the tithes levied in his district.

13. We were told that a line drawn either from Sooruf, the name given to a ridge of sandhills amongst which a few fishers' huts are scattered, or the Sodeyh river which joins the sea a little to the east of Sooruf, to Cheduk Melek, the name given to a heap of stones on the summit of a hill on the range nearest the sea, would about define the eastern boundary of the Biaban and the western boundary of the Gaih districts, and that a continuation of the line from Cheduk Melek in a zigzag north-westerly direction along the Halari range would mark the boundary of the Bashakud and Gaih districts.

14. Shekh Saeed of Bunder Abbas was good enough to send a man to accompany us to Jashk, and from the chief of the latter place we received every assistance and civility. He provided us with animals, himself accompanied us to the eastern boundary of his district. The chief of Jashk and others were pleased with the prospect of the telegraph being carried along their coast, and seemed to appreciate the advantage it would be to them.

15. Had the *Amberwitch* arrived when due, we could have completed our land trip to Chonbar as originally intended, but the detention at Bunder Abbas cutour time so short that we were obliged to go by sea from Sooruf to Chonbar. However, from the information picked up at Sooruf, Tank, and Chonbar, we can form a pretty correct idea of the people and country. Two large tribes, the Meliksha and Cingala, and a sprinkling of Hote Judgall, &c., inhabit the country between Sooruf and Chonbar. Some of the Meliksha whom we saw near Sooruf volunteered to take us through their district, and though they were profoundly ignorant of who or what we were, and thought our country was Bassiduh, seemed to think that a telegraph erected by a people that would pay for labour would be a great gain to them, and were certain that no local objection to its erection would be raised. They described the physical construction of the coast as similar to that between Jashk and Sooruf, with a few insignificant spurs jutting seawards from the hills. When we landed at Tank a number of the Cingala collected and were pleased to see us. They hoped we had come with hostile intentions towards Mir Addulla wulud Umrad Mahomed of Gaih, whose tributaries they are. They complained bitterly of the Mir's exactions, and hailed with delight the prospect of a telegraph through their country, associating it with protection to themselves from oppression. It appears that before Gaih became

tributary to Persia, these tribes were very lightly taxed, being assessed in a few camels, sheep, cows, goats, &c., but that now they are forced to contribute ten times the number to enable Mir Abdulla to meet the demands of the Persians. They declare their intention to resist his extortion this year, and say that if he attacks them single-handed they do not fear the result, but that if he is assisted by the Persians they will abandon the country and do their best to emigrate to Oman. They informed us that camels could get along the coast, and that no hills of any magnitude project into the sea between Sooruf and Chonbar.

I have the honour to be, &c.

W. P. JOHNSTON.

REPORT

OF

A JOURNEY FROM SABRISTAN TO KIRMAN.

REPORT of a Journey from Sabristan, S.E. of Kirman, to Chonbar, on the Coast of Beloochistan, viâ Bampur and the Pass of Fanoch.

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Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	Narrative, and Particulars of Route.
Jan. 21st.	Darzin	18	E. by S.	Ground hard, gravelly, and tolerably level. Water abundant. Darzin was once a large town, and is celebrated as being the place where Firamorz, son of Rustum, was executed. It now consists of a modern caravanserai erected within the last three years by the Wakil-ul-Mulk, minister of Kirman, and one or two other buildings on a smaller scale, but much in the same style of architecture. A few widely-scattered ruins are all that remains of former days.
22nd and 23rd.	Bam	17	E. by N.	Road good, over hard, gravelly plain, as yesterday; at first about E.S.E. then nearly E.N.E. About thirteen miles, a large earthy-looking village of domes on left, called Bahdirun; on right a kind of caravanserai known as "Haji Askir." The town of Bam, a name corrupted from "Bahman" its founder, is situated on a large and somewhat elevated plain between a range of snow-capped mountains at a considerable distance to the S., and low rocky hills a few miles off to the north. The old city, now the fort, is a mass of ruins, but the walls are in a good state of preservation, and the citadel, with its lofty white tower, is a picturesque and striking object. Pottinger observes that until the expulsion of the Afghans this was held to be the frontier town of Persia on the S.E. His description is now sixty years old, and he speaks of the ruins as testifying the existence of a much larger place. Since he wrote it has been the scene of an

international struggle, which, added to an earthquake, resulted in the almost utter destruction of the town within the walls. Nearly thirty years ago the commander of the Shah's army besieged there the well known Agha Khan Mehalti, then a rebellious governor of Kirman. The fort was held for more than a year against the royal troops. The shot-marks in the walls prove that the matter was in earnest, but the capitulation appears to have been peaceably effected. It is now satisfactory to see that the more modern town, such as it can be built independently of fortifications. Estimating the houses to be about 2,500 and the population 10,000, I should say that not one-twentieth part of the inhabitants live within the walls. Indeed it seems to me that no residents are allowed there but the garrison and families with a few vendors. Through the kindness of the governor of Kirman, who gave me an order in his own handwriting to the commandant, I was admitted to an inspection of the fort, a really interesting illustration of Oriental architecture. Pottinger mentions but one gate. That one is doubtless the same as that by which I entered, and leads by the main street and bazaar to the citadel. I am informed that there are two other means of ingress and egress, but saw one gate only. There is a large irregular ditch outside, in conformity with the quadrangle, of which the extent would perhaps be five hundred yards for each face. The citadel appears to be partially built upon natural rock, and is provided with a well of drinking water. I learn that there are two companies of infantry and a few artillery kept in garrison here. My impression is that these companies cannot be reckoned at their full strength, and that there may be twenty gunners. The towers were alive with red coats, and about fifteen artillerymen were drawn out, under a naib or lieutenant, to carry swords, as we passed, towards the citadel; but what description of ordnance, if any, was under the large white cloth thrown over the two gun-carriages I cannot determine. The men were generally well dressed, and smart-

Date, 1866.	Stage for the day.	Estimated distance in miles.	General direction.	Narrative, and Particulars of Route.
140				looking for Persian soldiers. An instance of smartness may be cited in the direct refusal of a sentry to admit me to the fort without a written order. It so happened that we had walked away from my lodging without bringing the essential document. The sentry placed his musket horizontally across the half of the gateway which he could so protect, and his comrades filled up the other half. On my expressing approval of the man's conduct, one of our party came up and assured me that the "yawur," or major commanding the fort was one of the finest officers in Persia, insinuating that the proof of discipline just witnessed was the result of efficient supervision. I paid a visit of ceremony to this functionary. He was an unmistakable invalid, and had hobbled out to meet me at the citadel. There is a good deal of cultivation, and there are many enclosed gardens at Bam, and provisions of kinds are abundant. So far as I could judge the inhabitants are in no way behind those of other large Persian towns in intelligence. Many trade or travel on the Indian road, but mostly *viâ* Bunder Abbas. I was recognised here by a follower of Mahomed Bakir, late of Kurrachee.
24th.	Allahabad Fort.	20	E. by S.	Our course is amid many scattered ruins, over an open plain, hard and gravelly: occasionally salt ground with tamarisk jungle. At three miles Burawur, a set of date plantations and small villages on either side the road. Last three miles E.S.E. Passed Gurgund at about ten miles to S.S.W. and five miles further Kruk to S. Range of small irregular hills on left, and prolonged higher range on far right. Allahabad is a kind of fort, with court and out-buildings full of

				poor cultivators or tenders of cattle of all ages and both sexes; cultivation sparse, but not wholly wanting; water abundant.
25th.	Nahimabad. .	16	E.	For the first mile and a half E.S.E., then turn up a broad nulla, over which looks the fort of Jemali, and proceed for six miles N.N.E. and N.E. to Azizabad thence about eight and a half miles to Nahimabad E.S.E. and E. Arjuman is described as a village to the S.W. From Azizabad there is much jungle and cultivation. Pottinger's remark of "fine country, fertile and well cultivated," is applicable at the present time. There are very refreshing green wheat fields, though in mere patches; and water is abundant. The Jemali nulla has a broad bed, thickly covered with high spear grass. The hill of Basman forms a striking object in the distance at about E.S.E. Artillery horses kept at Azizabad owing to plentiful forage. Country studded with forts and farms. Nahimabad is quite a populous village, but the space within the walls is insufficient. Much henna is here grown for export. Its small green leaf, pounded into a pale green powder, constitutes the well-known red dye used for staining fingers and nails. The berry is rubbed when dry in the palm of the hand, and produces a fine seed, which is profusely scattered to produce crops. We have now fairly entered the "Garmsir" or hot climate, and the difference is very perceptible.
? 26th and 27th.	Regan.....	26	7 miles E.S.E. 19 S.E. by E.	About seven miles, Burj-i-Maas, and date trees near water, with a ruin on a hillock. Up to this point tamarisk and khor jungle, though not so thick as yesterday. The last is evidently the "kunda" or thorn tree of Sind. Afterwards descend to a vast open plain, hard and gravelly, with wild and widely scattered vegetation. No water for about nine miles, when soil becomes more sandy and prolific of wild products,* and the ground less level. Regan is quite a small village, and owing to the low jungle is imperceptible till approached closely.

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* NOTE.—Among others those known as "Ak" and "Bou" in Sind.

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	NARRATIVE, AND PARTICULARS OF ROUTE.
142				A Persian detachment of infantry and guns under command of the Sirheng (lieutenant-colonel) Ali Murteza, son of the minister of Kirman, is encamped here, and I am met by the yawur or major of infantry. On alighting and reaching the quarters assigned me, a messenger from the Sirheng proposes an interview, and it is agreed that I am to receive the first visit. The Sirheng comes accordingly, accompanied by Farjullah Khan, governor of Bam, and Mirza Mehdi, an officer of engineers. In the evening I returned the call at the tent, and meet there among others Ibrahim Khan, chief of Bampur. The Sirheng has a jovial and good-humoured face, and frank, easy manners, reminding me at once of his father. The chief of Bampur is a square-built, thick-set man of perhaps fifty or sixty, whose well-dyed and silky beard renders doubtful an estimate of age. He talks a kind of Frontier Persian, which is to me rather difficult of comprehension. Having sent me a message to the effect that I must return from Bampur to Bunder Abbas if the Chonbar route were found impracticable, I spoke to him on the subject. He told me that Shái Abdulla, chief of Sirbaz and Kasrkund in Mekran, had been lately murdered, and that his son, Din Mahomed, having proved rebellious there had been bloodshed. But he could not now say what was the state of affairs, for he had been four months absent from his head-quarters. This Ibrahim Khan is the man who threatened interference with our Mekran land line telegraph about three years ago, and is said to have himself come down with troops near to Gwadur and killed there one Shahdada Belooch with

				others against whom he professed to have cause of complaint. His conduct occasioned a remonstrance to be addressed to the Persian government through Her Majesty's minister, but the matter dropped after a short correspondence. I said if it were really contemplated that I were to go to Bunder Abbas, it would be better for me to go there at once and abandon the visit to Bampur; but seeing that this notion was likely to meet with too ready approval, I changed my tone, and said I would go on as before intended—at all events taking my chance as to further progress. The day after my arrival at Regan the Persian camp moved. A man named Thamaspkuli, employed by Ibrahim Khan of Bampur in a kind of frontier police, and who in late years distinguished himself in action against the Beloochees at the fort of Erfshan, is sent to escort me from this place on the morrow, for I am detained a day to procure camels and mules. It is decided that I am not to accompany the camp, as the Sirheng proceeds by the upper road, which it is not desirable I should follow, and has, moreover, some work which may detain him. I halt a day accordingly at Regan.
28th.	Ab-i-garm	21	S.S.E. & S. by E.	After about seven miles the jungle ceases and road becomes stony. At ten miles further enter the hills, another four miles bring us to the hot springs which give a name to this halting-place. They are indicated by clouds of smoke rising above the long grass with which the waters are choked. No village or house of any kind here, and but few traces of inhabitants. The rise is very slight on leaving the plain country. It is little more than becoming shut in by low, black, burnt-looking rocks, some sharp and angular, some like long walls with flat tops. Drinking water procurable from hot springs. It is not tepid but actually warm, almost hot, and when cooled is sweet and drinkable.

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	Narrative, and Particulars of Route.
29th.	Saifu Din ..	21	S. S. by E. 10 E. S. E. and S. E. then E. by S.	Very stony for the most part, with occasional green and grassy plots, between low, black hills, some sharp and angular, some with long flat tops. The black rock is scattered about like coal broken up into small fragments. At thirteen miles "Chahi Kumber," where we were to have halted, but at my instance we moved on to a fine grassy plain with rain-water, and covered with flocks of sheep and goats. This is called Saifu Din, and the "Godur" or pass of that name opens out before us. Our object in pushing on is to avoid the rain, when the mountain torrents may come down in sufficient force to delay progress. Occasional ascents and descents in the day's march, but all are comparatively easy, notwithstanding the many loose stones. A few settlements of shepherds are about, but the want of population is undeniable. A Belooch guide told me that 150 soldiers had lately preceded us by this same route. They were on their way to Bampur.
30th.	Giran Reg ..	22	S.S.E.	Road generally very stony. Follow the base of the hills in an N.E. direction for a short distance, and turn S.E. into the pass. Ascent from plain not more than 700 feet, but steep enough to cause us to dismount. The black rocks are gloomy but picturesque. Here, regulated by the watershed, is the boundary of Nahnashir and commencement of the Bampur district. There is a fine view on looking back of the mountains S.W. of Bam. The descent to the next plain is short and easy. Move across it in an amphitheatre of low hills for about seven miles, and again reach rugged and stony ground. To S.S.W. are some curiously shaped rocks, one especially called "Mill-i-Ferhad." Cross and recross the Giran Reg river, encamping finally

				on its eastern side, and E.S.E. of the hill known as "Takht-i-Nadir." Ground stony, but many patches of sand and gravel, with tamarisk jungle, wild oleander, and much desert vegetation. Water here and there in the bed of Rudkhana, which is rather a mountain torrent than a river. No sign of habitation.
31st.	Giran Bega.	23	S.	At first follow the course of the Rudkhana over stony and difficult road, the track being sometimes quite lost. At five miles two streams meet it from E. and N.E., but we turn or rather keep to the S.S.E. At twelve miles, after some rough marching, "Sir Naran," a halting-place, with fresh-looking streams falling over huge flat stones; water slightly brackish. At Giran Bega see many shepherds and flocks. Encamp in a kind of rocky recess like the bed of a torrent full of tamarisk and oleander.
Feb. 1st.	Laddi	27	S. S. E.	After ten miles passing "Chori Buzun" and black Iliat tents, reach the Rudkhana of Khosrin. Another nine miles Rudkhana Zol or Sol and single Bêr tree. Another eight miles the tamarisks of Luddi. Road at first very stony but improves at Khosrin, where we emerge from the hills into a more open country, and meet one or two small kafilas. On leaving Khosrin come upon a large, high, stony plain which slopes gradually downwards and improves as it becomes lower, vegetation being less sparse and more healthy. Luddi is in quite a forest of tamarisk and thorn trees, some of fair size and appearance. Wild caper also recognised. Had some trouble in finding rain-water, but a supply pointed out to us by a shepherd's boy. Flocks here numerous, and good grazing for camels. The day's encampment is cheering compared to the dreary and desolate hard, black hills left behind. The poor Belooch shepherds here, though rough outward specimens, seem civil and well-disposed. Rain at night.

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction	Narrative, and Particulars of Route.
2nd.	Kalanzao ..	14	S. S. E.	To-day's encampment much like yesterday's, among tamarisk trees and on sandy soil. There is no want of grazing for herds and flocks; and from what I can learn rain is pretty regular here at this season. The Basman Hill seen from Regante the eastward, now stands out N.E. by N. ½ N. Its shape and snowy crest make it a picturesque object.
3rd.	Chabi Shor Chabi Jellal.	22	E.	I mention both names, for the first appears in the German map of Handeke and Leo. There is now no well there, so we moved on about a mile further and halted at one indicated by our guide. The water, however, was so putrid that we could not drink it. Better was shortly found in the vicinity. Jungle not so thick as before, and soil more sandy. No pools of rain water visible as at Laddi and Kalanzao.
4th and 5th.	Kutch Girdan.	25	E. S. E.	For three miles our course was observed to be E.N.E. We lost our path, and our guide, instead of seeking to regain it, started off to find an upper road which we were to have reached at a latter period in the day's march. This upper road is that taken by the troops, who are reported to have been yesterday at Kuch Girdan. We reach it after some seven miles, and see distinctly the track of men and cattle. At four miles further a well; but we passed also two or three at intervals. Another fourteen miles bring us to our halting-place among fine large tamarisks near a Rudkhana, which, if not the Bampur river of the map, is a branch of it. The detachment had left this morning and were to-day at Cassimabad, nine miles from Bampur. Thamaspkuli writes to Ibrahim Khan announcing our arrival thus far. Some of our camels failed in coming up to-night. Roads heavy.

				The country is still the same vast plain between mountains. The ranges to the north are probably one hundred and fifty miles distant from those to the south, and beyond the latter is Mekran, entered only at certain passes, all difficult. Observed to-day five specimens of the "kirrer" or wild caper.
				Compelled to halt on the 5th. Towards morning a damp mist rose with a high wind which lasted the whole day. Our missing camels came up late, less one reported to have died. Belooch cultivators here have been transplanted from Narmashir beyond the border. They are not a handsome race, have an African cast of feature, and talk semi-comprehensible Persian.
6th.	Bampur	16	E. ¼ N.	Crossing the Bampur nulla on the way, proceeded about seven miles to Cassimabad, a Belooch village with Farm Fort, the inhabitants of which look wild and wretched. The poor habitations, the ill-clothed men, dirty and dishevelled women, half-naked children, and general squalor and ugliness of this dark complexioned race recall to mind the squaws and wigwams of other climes. My own horse having a sore back, I was glad to avail myself of a good riding camel sent out for me by the Sirheng, who had just marched into Bampur. Halted for a few hours at Cassimabad in a neat and roomy hut made of sun-dried bricks, mud, tamarisk trees, and like rude materials. Road sandy and heavy, through loose jungle.
				According to the programme of my guide, who was in communication with Ibrahim Khan, I had to leave Cassimabad for Bampur at about three o'clock P.M. Shortly before reaching the latter place I was met by the Naib Suliman Khan, Mohim Khan, a chief residing near Minab, and several followers. Many Belooch horsemen joined in the retinue, and the Persian troopers performed clever skirmishing exer-

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	NARRATIVE, AND PARTICULARS OF ROUTE.
148				cises. A horse had been sent me by the Sirheng to replace the camel ridden in the morning. To save time, and avoid the discussion so important to Persians as to who pays the first visit, I rode at once into the camp and alighted at Murteza Ali's tent. He received me very cordially, and we were soon joined by Ibrahim Khan and others. Matters did not at first look promising for my journey to the coast. The Sirheng was evidently inclined to do all I asked. He knew that his father had meant well to us, and had, at his father's written request, asked to see a letter addressed to me by the old wazir since leaving Kirman. This letter was in reply to one of my own in reference to statements made by a certain Mirza Mahomed Ali, whose veracity I had reason to doubt, and was couched in terms of marked friendliness. But the young Sirheng was only the nominal head in the present case. Ibrahim Khan was the man to decide on the propriety or otherwise of my journey through Mekran to the sea; and I knew that Ibrahim Khan had formerly shown himself openly hostile to British interests at Gwadur. Still there was something I did not dislike in the chief of Bampur. If a tyrant and a braggadocio, such a character was rather a development of the nation than individual; whereas plainness of speech and absence of compliment were characteristic of the man. And Ibrahim Khan was plain-spoken, and "unblest with set phrases." Suliman Khan had told me as we rode in that the country about Kasrkund was in a disturbed state. I had heard the same story at Regan and elsewhere, and the account was now confirmed. It was clear that I was not to go the direct route either by Gaih or Kasrkund to Chonbar. I suggested the road to the eastward, or to

Sirbaz in Persian Mekran, from whence I could proceed due south to Gwadur. Ibrahim Khan said he would send me there if I wished, but once across the Kej frontier he could interfere no further. From all I could gather he was not at feud with Faquir Mahomed of Kej, but he had no wish to enter into communication with him; nor could their relations together be particularly intimate. It occurred to me that going over to Faquir Mahomed against the wish of the Persian authorities, or rather at my own independent suggestion, might offend if it did not excite suspicion, so I said plainly that provided I got to the sea coast of Mekran, the route was immaterial. Ibrahim Khan then offered to send me to Tenk, a little fishing village west of Chonbar, where I could get boats to Muscat, and on this understanding I left the tent. Shortly after an old Persian came to me from the chief, and with him I compromised the matter, arranging that we should take the Tenk road from Bampur, but turn off to Chonbar before reaching the sea. This suited my purpose in two ways—1*st*, it enabled me to ascertain how far Persian control was exercised in the country bordering closely upon Gaih and Kasrkund under Mir Abdulla, the Belooch governor of Mekran; and 2*ndly*, it led me through the pass of Fanoch hitherto unexplored by any European.

The next morning Ibrahim Khan visited me in person. In the afternoon I returned his call, and then I was visited by the Sirheng, accompanied by the engineer Mirza Mehdi and others, and revisited by Ibrahim Khan. The latter was usually silent and reserved in the presence of the Sirheng, and not very communicative at his own quarters, but had much to say in his own rough manner if applied to in the way of business.

The town of Bampur, independently of its Persian garrison, may contain from four hundred to five hundred houses. With the exception of

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	NARRATIVE, AND PARTICULARS OF ROUTE.
				Ibrahim Khan's house and one or two other buildings, these are little better than Belooch huts. The fort is a conspicuous object, built on long irregular low mounds. The higher or northern side boasts the citadel, from which the walls run down in an irregular line from north to south. There are soldiers and guns within, but the Sirheng's detachment is encamped on the plain outside. I am located in a fine large garden of recent construction, walled in, and rich with date trees. It has also a few ber-trees, and a specimen of the "sipastara." Provisions appear good and abundant, and water is procurable from the neighbouring nulla. There is much cultivation about Bampur itself and at Cassimabad.
				The guide sent to me by Ibrahim Khan is an old man of about three score years, known as "Meshidi Abbas." He has been in the habit of taking goods to and fro between Bampur and the sea, has often been to Western India, and is comparatively enlightened. By his own account he holds the appointment of collector of Fanoch, and no doubt he is employed by the Bampur authorities in the collection of its revenue. Though I could have wished he had given me more reliable information on the names and status of the Belooch chiefs, and vilified the unfortunate Mekrans with less determination, I cannot but acknowledge his thorough loyalty to his own government, and unflinching nationality. In spite of years he is hardy and active, like most of his countrymen who earn their bread in the saddle.

8th.	Belushan Chah.	27	S.W.	After Cassimabad, to which place we returned before taking the road to the southward, the country to-day is more like a desert than any I have seen in these parts, yet no more meriting that designation than Sind which it somewhat resembles. The sandhills are, however, few and far between, and never succeed one another with the regularity of ocean waves, as between Rohri and Jesulmir. Halting-place beyond a range of these; but I could not find a trace of the well said to mark it. Ground here a little harder, and vegetation more generous than before.
9th.	Muskotu....	26	S.W. by W. ½ W.	I am unable to find that any English or European traveller has ever preceded me in the route now followed. Esfaca, mentioned by Grant, is to the S. of our position of yesterday. To day we leave it to eastward after proceeding some two and half miles S. by E. At about eleven miles came upon a village of Lashari Beloochees, near a well and low trees. We alighted in the immediate neighbourhood, and received a visit from them. Their curds, fresh butter, and dates were unexceptionable. At five miles further we came to some date trees, and a pool of water in high grass. Saw here a woman dyeing cloths. The dye is procured from the bark of the date palm, mixed up with clay and water, and is almost black in colour. The sandhills become less obstructive, as we approach the Mekran hills, and the road is tolerably good on harder ground. Muskotu is a poor village with few inhabitants, but has doubtless seen better days. It is situated near a date grove on the S. bank of a large, broad, and now dry Rudkhana. Besides the usual Belooch huts it has its mud fort, and indeed a second one in ruins. I am told that not many years ago these two forts, which are close together, were at war, and each assailed the other with stones. It is probable that the sequel to the story would tell of Persian interference and the

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	Narrative, and Particulars of Route.
				removal of the more dangerous of the combatants; for Ibrahim Khan certainly destroyed one of the two forts. Small-pox, and more recently cholera have contributed to the ruin of this village; but its position will probably prevent its total abandonment.
10th.	Fanoch	25	S.S.W.S.	Rain last night, but fine weather again to-day. Road hard and stony, or sandy and gravelly; intersected with many beds of streams and small ravines, and studded here and there with low black rocks or hillocks. About seven and a half miles our road joins a second from Kalunzao, my stage of the 2nd instant, between which and Fanoch are three stages. At eighteen miles a hillock on which is a "Sungal," or square of low stone walls, thrown up for defensive purposes. My old Persian guide informed me that the grandfather of a Belooch horseman who accompanied us had here successfully resisted a foray of Shai Mehrab, the Bampur chief of Pottinger's time, but that the poor man was afterwards killed in a similar affair elsewhere. A mile further a large Rudkhana called Acinini, with delicious water. This river rises here in the plains after heavy rains, and winds into the pass of Fanoch, thence finding its way through Western Mekran to the sea at or near Kalig. Near Fanoch I observed on one side of our road some circular patches of light colour in the darker soil. These were explained to me as the "Pai Dulduli-Ali" or footmarks of the horse of Ali. They may have been three or four feet in circumference, perhaps more.

11th	Benth				Fanoch is a comparatively large Belooch village in the plains north of the Mekran hills and close to a pass bearing the name which enters Mekran from the Persian district of Bampur. The fort is in ruins, and appears quite uninhabited. There are about one hundred houses, and probably five hundred inhabitants, nearly all of whom are slaves. A village called Ranoaj about seven miles to westward pays one-third of the revenue to the two-thirds of Fanoch, and the whole is received by a Persian collector. Chakur Nahrni, grandson of Shai Mehrab, was until lately Nahib of Fanoch, but he has been removed to the more important post of Sirbaz. His little son remains at Fanoch, and was brought to see me. He is a well-looking boy of about ten years, precocious in manner, and evidently tutored in complete subservience to Persia. I gave him a silk scarf of which he seemed proud, and immediately tied it round his head in token of appreciation. The date trees here are in a great profusion, and there is cultivation to some extent.
		29 S.S. W. S. W.S.W. S. S.W. S. by W. W.			Enter the Fanoch Pass into Mekran, and move for some distance through a barren defile with nearly perpendicular rocks on either side. But the road, however stony and rugged, was not so much an obstacle to our camels as the water which in some parts was very deep, and had collected in occasional scarcely fordable pits. Nor was it always practicable to avoid these. At sixteen miles, defile which had been improving, widens to open space, with view of distant hills; these narrow and widen again. Nine miles further Dehan not visible from road owing to trees. About two miles from Dehan is the Benth hill, at foot of which is the village. We left it to the right, and alighted near some scattered trees beyond. My guide stated that Dehan has been quite depopulated by the late cholera visitation, there being some fifteen houses only left out of one hundred and fifty. I would hope that this was an exaggeration

Date, 1866.	Stage for the day.	Estimated distance in Miles.	General direction.	Narrative, and Particulars of Route.
				At Benth about five hundred persons are reported to have died. I spoke to a fine old Belooch on the subject, and learned from him that the disease had ceased to rage for the last five months. There is a fort here, the chief of which is quite a young man, son of Ahmed Khan, deceased. The village is populous, but I have no good authority on which to suppose a number. There should be no less than two thousand. Our course to-day was almost wholly along or beside the bed of the Fanoch river, which now changes its name to Benth. We met an unsual number of Belooch men and women, all engaged in locust hunting. They had come down the river several miles from Fanoch to take advantage of an incursion of these creatures, which my Persian designated as at once a calamity and a benefit. The Beloochees boil and salt them.
12th.	Gonz	46	S.S.E. S.E.	A long march of twelve hours to-day, of which the first six were spent in following the course of the Benth river, which again changes its name to Korandab, and unites with the Nasferan. The second half was for the most part over a wild rugged country, amid hills such as I had seen daily in Eastern Mekran, and with few traces of habitation or life of any kind. It is no uncommon thing in this land to march twenty or thirty miles without meeting a human being or even a quadruped, and to this assertion I can testify from experience on either side of Gwadur. Passed to-day a block of white stone, which had been scooped out at the top like an apothecary's mortar. It is resorted to by the Mekranis because the powder from the stone is considered an infallible remedy for toothache. Passed also the "Pir Ali,"*
	* Tir Ali.			

				or a rock cleft in twain by the Prophet's son-in-law. Legends of Ali abound throughout Mekran. The marks of his foot or the wonders of his sword are described in all parts of the country. Amid a population of Sunni Beloochees the fact savours of prior Persian occupation. Choose some tamarisk bushes in sandy soil within reach of rain water where to spread our bedding. The name recorded applies generally to the neighbouring tract.
13th.	East of Tenk River.	28	S.E.E.	Start about 4 A.M. but before dawn lose our path in the rocky ground, and have to wait for sufficient light to resume marching. Fall in with a "Dowara" or moveable village of Beloochees at Bir. They recognise my guide, flock round him, make him dismount, carry him off, and are apparently bent on entertaining him, but as we have a long march before us, I move on without awaiting his return. He soon reappears attended by two Beloochees from the settlement. Descend into the bed of a mountain torrent, and enter afterwards the broad bed of the Tenk river, remarkable for its high and steep banks. This we shortly abandon, and re-enter at a new point, then continuing to follow it for some miles. From the Tenk we strike off in an easterly direction across country. Long before midday, however, rain had set in, and up to nearly three in the afternoon we were working on under difficulties. Our intention had been to reach, if possible, the Khazaikir, which it was feared would soon become impassable, but long before this obstacle was within easy distance we were forced to dismount and bivouac for the night. The streams were coming down from the hills fast and furious in other quarters, and we were met by one which was sufficient to stop our progress. Rain till about 10 P. M., and shelter somewhat primitive. One of these many instances of popular superstition peculiar to the Beloochees was afforded in the march of to-day. We were passing the Shrine of Shai, or Syud Harun, in the bed of the Tenk river, and two guides had accompanied

Date, 1866.	Stage for the day.	Estimated Distance in Miles.	General direction.	NARRATIVE, AND PARTICULARS OF ROUTE.
156				us from Bir to point out a bypath by which we could avoid a deep water passage likely to detain us. Suddenly the guides stopped their camels and dismounted. One took in his hand a biscuit, turned to the right, and reverently placed his offering on the ground; the other advanced a few paces in the same direction and made a solemn bow. Closely watching the quarter indicated by these movements, I saw a tree which, though a tamarisk, looked almost Druidical, and quite picturesque, but Merhidi Abbas stated that the shrine was a well. He further informed me that no Belooch ever passes this place without laying there his offering, or would think of reclaiming any money or property accidentally dropped there; that if a traveller halting there for the night burns the wood and gives his cattle the fodder procurable on the spot it is well with him, but if he should take the wood to burn elsewhere it would be impossible to light it; or if he should cut and carry away the grass for consumption elsewehere it would kill the animals which it was intended to nourish.
14th.	Khor-i-Kir..	5	E.	The five miles were not done, moreover, in one march, for we were informed before arrival at the Khani that it was not to be forded. Put up accordingly near a Belooch "dowara" and made a second move after midday. After reaching the bank of the Khani we found the grouud so soft and untenable, and the force of the current so strong, that we were obliged to abandon the attempt to cross to-day. This river comes down, it appears, from Gaih, whereas the Tenk is

				from a point to the westward of that town. But the latter has by far the finer bed; nor did I see anything like its steep banks at the Kham-i-Kir.
15th.	Tiz Hill	43	S.E.	Crossed the Kham. At eighteen miles, Kham Sangam, coming from the hill of Beshimun, which was forded with comparative ease. Passed on the way some Belooch tombs within walls in good preservation, also patches of cultivation. Sixteen miles further the sand hills of Pareg, where there are a few huts. Country difficult to traverse in parts from water. Road at one time among low hills and rocky ground, at another over alluvial or sandy soil and amid low, scattered jungle. From Pareg to the top of Tiz hill between Triz and Chonbar is about nine miles, and thence only three remain to the latter place. We had seen the smoke of a steamer to seaward and were desirous of completing our journey, but night had set in and the path was lost. Bivouacked therefore for the night on the heights above Chonbar.
15th.	Chonbar....	3	S.	Descend the hill to Chonbar, where I was received by the Wali and Ismael with much cordiality, and at once recognised as an old acquaintance. They accompanied us to the steamer, and we gave them a few trifling presents. Joined here by Major Smith, Lieutenant Stiffe, and Mr. Johnston, with whom I proceeded in the *Amberwitch* to Gwadur and Kurrachee.
	Total miles..	516		
	Add from Teheran to Sabistan.....	811		
	Total from Teheran....	1327		

Bombay, 14*th March* 1866.

F. J. Goldsmid, Lieut. Colonel,
Superintendent Indo-European Telegraph.

No. 1 of 1866.

Sabristan, 20th January 1866.

Sir,—As we are now about to separate for a time, it is perhaps well that I should place on official record any notes or data which may be of assistance in guiding you in your movements between Bunder Abbas and Gwadur.

2. Mr. Walton will no doubt be able to state what part of the coast has been inspected and reported on by Colonel Pelly. I trust that you will be put in possession of a copy of that officer's report. At all events you will be able to learn at Bunder Abbas the exact point to which the Muscat authority extends. And it would be manifestly needless to undertake an inspection of a country which has already been inspected and reported on with a view to future telegraphic operations.

3. The Imam's territory on this coast * is, as you are aware, farmed from the Persian government. From its eastern boundary to Chonbar it is commonly reported to be under the immediate control of Mir Abdulla of Geh. I believe you would have no difficulty in learning its extent and character, and verifying the statements as to its government at Bunder Abbas or Chonbar. As to prosecuting further inquiries at Jashk or elsewhere, you will be better able to judge of the propriety or necessity of such proceedings after inquiries at Bunder Abbas, and consultation with Mr. Walton, who is likely to have much information on the subject. Chonbar is to the best of my belief a *bonâ fide* possession of Muscat. I am not aware that there is any objection to your visiting that port should it be convenient and desirable to do so. When there in

* Except Chonbar and Gwadur.

the beginning of 1864 I was kindly received by the Wali, and made him a few presents.

4. From Chonbar to Gwadur is I should say about eighty miles by sea, but somewhat more by land. The bay of Gweltur intervenes, and the head of this bay is at some distance from the general line of sea coast. It would be desirable to ascertain the utmost point to which the Chonbar territory extends eastward. From thence to a point in Gweltur Bay perhaps the "Dast Khor" is said* to be under the immediate control of the chief or chiefs of Bahn Dastyan. From the point referred to in Gweltur Bay to Ras Pishkan, which I understand to be the commencement of the Gwadur territory, appears to be more or less a dependency of Kelat. Ras Piskhan is twenty-four miles west of Gwadur according to the measurement of February 1862.

* Corroborated by the Persians themselves in Western Beloochistan.

5. You were present when the Wazir of Kirman informed us he had no control over the coast between the Imam's Bunder Abbas territory and Chonbar. And without you had some authority to go there—either in communication with the local chiefs or otherswise—I am not of opinion that it would be advisable to abandon the ship and march along it.

6. The coast between Chonbar and Gwadur is evidently considered by the Persians to be still less under their orders. Indeed I believe Jeori and that part immediately west of Gwadur to be as above stated still within the boundaries of Kelat—most probably part of the Rej division. I have myself been to Gweltur and found the people there poor and friendly; but as the whole of this section is so near Gwadur, I see no pressing necessity of doing more than ascertaining in a general sense its natural features, and

verifying the statements as to who are its actual chiefs, and what allegiance, if any, they owe to superior rule.

7. So much, however, will depend on your own discretion and judgment, you are also so well acquainted with what are our present objects in ascertaining the several routes from one line of land telegraph to another, and how essential it is to keep clear of all political questions in our intercourse with the inhabitants of the coast, that I will abstain from hampering your movements by any further or more definite proposals hereon.

8. It is probable that I may reach Chonbar about the 12th or 14th proximo, when it would give me great pleasure to meet you again. But I can neither ask you to detain the steamer nor to guide your plans by mine, as it is impossible for me to anticipate my movements beyond Bampur,* which I am led to expect may be reached on the 3rd February. Besides, if it were practicable to proceed from the latter place to Gwadur direct, I should prefer adopting that route as one hitherto untravelled by Europeans.

* Did not reach this place until the 6th February, or Chonbar till the 16th. The distances were greater than estimated.

9. The above has been written in ignorance of any instructions on this subject which may have been issued by the Government of Bombay with reference to a telegram addressed to the Chief Secretary on the day of our departure from Ispahan. Should such be received at Bunder Abbas, you will of course modify your proceedings accordingly.

I have the honour to be, &c.
F. J. Goldsmid, Lieut. Colonel,
Superintendent Indo-European Telegraph.

Appendix D.

No. 66 of 1866.

From the Superintendent Indo-European Telegraph,

To the Secretary to Government, Bombay.

At Sea, the 11th May 1866.

Sir,—I have the honour to report my departure from Kurrachee yesterday, and intention of proceeding to England from Bombay on the 20th or 24th instant.

2. During my recent tour in India I have taken the opportunity of meeting the Chambers of Commerce, or influential members of the Chambers, at Bombay, Madras, Culcutta, and Kurrachee. In assuring the mercantile gentlemen with whom I have had the pleasure of conversing that it would be my study to meet their wishes in removing irregularities now existing, or affording facilities yet wanting in Indo-European Telegraph traffic, I believe myself to have acted strictly in accordance with the objects of Government. The great improvement in correspondence which has been observable during the whole of the present year appears to give general satisfaction, and leads to the belief that ere long matters may be placed on a thoroughly efficient footing.

3. The question of International Account is an intricate one, and will engage my attention immediately on arrival in England.

4. A good practical translation of the Convention of Paris has just been completed, thanks to the exertions of Mr. Brasher, the Traffic Manager at Kurrachee, who lost no time in carrying out the instructions on the subject which I addressed him from Culcutta. Copies will be communicated to the Director General of Indian Telegraphs, with a view to the adoption of all such of its provisions as may

conveniently be admitted into a Code for the Indo-European line in its progress through the Indian system as elsewhere.

5. Other matters of detail have been recently submitted, or are in course of submission to Government.

6. I may be pardoned for the expression of doubt whether, by Government Resolution No. 108 of the 25th ultimo, the support of His Excellency in Council has been accorded to my proposal for the land extension line, on which so much of my time and attention has recently been taken up under the impression that the scheme had generally been approved. Without such approval I can hardly feel authorised to continue to press the matter. It is now incumbent on me to enclose a copy of the memorandum on this head which I had the honour to submit to the Secretary to Government at Simla by permission of His Excellency the Viceroy. If in this paper I should have expressed opinions at variance with those entertained by the Government of Bombay, I can only plead, in explanation the kind support which I was fortunate enough to secure for the same object on a former occasion. Then, moreover, the argument of Persian encroachment rested on hearsay evidence, whereas it has now been strengthened by ocular demonstration.

7. Lieutenant Stiffe casually mentioned to me at Kurrachee that some accident to the cable had occurred so lately as a month or two ago, and showed me a Government Resolution (No. 114 of 3rd May 1866) approving of his conduct in its restoration. I knew nothing of this when estimating the cable injuries in paragraph 4 of the memorandum written at Simla. Indeed the correspondence on the subject has never been forwarded for my information up to this moment. But it serves to strengthen the case in favour of an alternative land line.

8. So great in my humble opinion is the necessity for an alternative that rather than abandon the proposal

altogether, I would suggest, if Persia declined to treat on fair terms for the Beloochistan Telegraph, to consider the feasibility of a line from the Derajat to Candahar, and thence to Herat—a comparatively inconsiderable distance. If not alarmed at our treating with the Afghans, Persia would be glad to obtain with our assistance a Meshed and Herat line, and if alarmed she would the more readily be inclined to revert to the original project in Beloochistan.

I have the honour to be, &c.

F. J. GOLDSMID, Lieut. Colonel,

Superintendent Indo-European Telegraph.

P.S.—Major Smith returns to Persia by the steamer of the 17th instant from Bombay. Having received no instructions to revisit Kerman, he will proceed by Bushire or Bagdad, as reported in my telegram of the 10th instant from Kurrachee.

Memorandum submitted to His Excellency the Viceroy at Simla on the 18th April 1866.

1. The line of telegraph connecting England with India has worked well and steadily during the present year, and in addition to the realisation of general objects of utility, promises to prove an important means of continuous revenue to the State.

2. This line has several branches in Europe, the failure or temporary suspension of any one of which between London and Constantinople* has no serious effect upon the through communication with India because another, and perhaps equally good one is sure to be available. From Constantinople to the head of the Persian Gulf, although the chances of failure are not at this moment sufficiently provided for, the existence of a Persian line prevents

* Or London and Tiflis on the Russian line.

any stoppage of communication by supplying a link with the Russian lines of Europe. In the course of another year it is believed that this alternative through line will be greatly improved, and the promised junction of the Turkish and Persian lines by Ezzerum and Tabriz is satisfactory in securing a new means of direct communication between Constantinople and Teheran.

3. But the cable or submarine section of the Telegraph has *no through alternative.* In extent about 1,250 miles, it proceeds from Kurrachee to Fao in Turkish Arabia, having stations at Gwadur, roughly 300 miles from Kurrachee.

At Mussendom roughly		400	miles from	Gwadur.
„ Bushire	„	430	„	Mussendom.
„ Fao	„	120	„	Bushire.

From Kurrachee to Gwadur there is an alternative land line along the coast of Eastern Mekran, and an alternative to the cable between Bushire and Fao is secured in the Persian line from Bushire, which not only joins the Russian lines to the northward, but turns westward to meet the main Turkish line at Bagdad. From Gwadur to Bushire there is no such provision. Failure in this portion of the cable would produce total stoppage of communication. And it depends much upon the season of the year, and other causes over which there is no control, whether or not the communication is readily renewed.

4. Even temporary suspension is more or less fatal to success. The mercantile community, whence comes the main source of revenue to the Indo-European Telegraph, are mistrustful of wires which only work periodically and spasmodically well. They have already observed in a first year's experience that in addition to the difficulties to be contended with in serving rapid and regular communication

on the Turkish and Persian land lines, the cable has been damaged on four or five distinct occasions and thus impeded traffic.

5. This cable may be considered the only section of the whole Indo-European line fairly in the hands of the British government. In this there is no divided control. It is our own property, and worked by our own employés under our own supervision and management, and its share of the £5 paid for a whole message from India to England or *vice versâ* is one half or £2 10*s*. The Eastern Mekran line already set up between Kurrachee and Gwadur has well illustrated the advantage of such an additional security to the traffic. When the cable failed on this section the land wires supplied the deficiency.

6. It is proposed that a through alternative be now found for the cable in the event of accident, by connecting the land line at Gwadur with Ispahan, or some other points on the Persian line from Teheran to Bushire. Ispahan is recommended because a line could be run thence to Yezd and Kerman with the greatest ease. The nature of the country would almost admit of driving a carriage from Kashan to Kerman without impediment. Were a railway contemplated nothing could in this respect be better; only materials are wanting both for railway and telegraph.

7. A line of less extent might be taken from Shirâz to Kerman, but the town of Yezd, of all others in Persia, has for India a certain special interest from proximity and its many Parsee inhabitants, and promises a commercial importance sufficient to claim admittance into any telegraphic system for Eastern Persia.

8. From Kerman to the sea the precise route is a question which still requires consideration. But if the general scheme were approved this difficulty could soon be

removed. At present the reports of Lieut.-Colonel Goldsmid and Major Smith will show the latest detailed information procured on the subject. It is recommended generally that the line be carried from Kerman to Bunder Abbas, and from Bunder Abbas eastward along the coast to Gwadur.

9. It might even perhaps be worth the while of Government, supposing no better means available to carry out the scheme, to be at the cost of setting up the whole line, on the understanding that from Ispahan to Bunder Abbas the revenues would be the property of the Persian and those from Bunder Abbas to Gwadur of the British government. The working expenses of the former would be paid by Persia, and of the latter by ourselves. In fact the first line would only be used by us as an alternative in case of failure in the cable, whereas the second would be our own to use as we pleased.

10. Cost could only now be roughly estimated. The distance would be about 1,300 miles. Wood is not easily procurable, and its perishable nature renders its use a poor economy. A line such as contemplated, to be set up and put in working order might need an outlay little short of £100,000, every charge included. Iron posts should certainly be supplied.

11. A Convention with Persia might on the other hand result in securing far better terms than above inferred. The success of local traffic on their existing lines in Persia should show the authorities in that country how advantageous to them would prove the extension of their internal traffic eastward. Accompanying is the rough draft of a proposed agreement.

12. It had been the intention of the undersigned to submit his report and that of Major Smith, R.E., with map, on their recent journey through Eastern Persia and Be-

loochistan in elucidation of the subject now briefly stated, but these papers have not yet been received from the Bombay Government, and the original sketch of the respective routes taken had unfortunately been packed in a bundle lost or stolen during the night near Karnal. The present memorandum is substituted for the fuller and more detailed information, which, however, it should be stated is more with regard to the countries traversed than the proposals resulting from the journey.

13. The Director of the Telegraph is about to proceed from Bombay to England, and if the recommendation of the Indian Government were accorded to his scheme, he would at once prepare all the requisite estimates of cost of proposed line, and explain personally to the authorities at home what appears to him the real urgency of the case. If required he would return to Teheran, as last year, with a new draft Convention, or furnish the data for the preparation of such a document at the India and Foreign Offices for despatch to Her Majesty's minister at Teheran. Otherwise he proposes to join Major Champain at Constantinople, and arrange with that officer all the necessary details for the permanent conduct of the Telegraph as now constituted in all its branches, submitting the result in a detailed report.

14. Little or nothing has been said of the political results of the Convention contemplated. But it is hoped they are not unimportant. Article VI. secures a Frontier, *beyond our own Frontier*, and from what has transpired already in Persia it is believed that this article might be carried. Mirza Saeedkhan* told Colonel Goldsmid, in discussing the question five months ago, that the governor of Kirman would decide up to what point eastward his control would reach. The governor of Kerman frankly admitted that he had nothing to say to Gwadur,

* Persian Minister of Foreign Affairs.

and had little power on the sea coast, but at the same time his authority enabled Colonel Goldsmid to proceed unmolested, with a guide and no actual escort through the passes of Mekran to Chonbar. Major Smith in like manner reached Bunder Abbas, and afterwards landed at Jashk, marching four stages, thence to the eastward. The governor of Bampur, the chief district of Western Beloochistan, who had formerly openly opposed our coming to Gwadur, defined his frontier and that of Kelat to Colonel Goldsmid with sufficient clearness to set the question at rest. But if we do not secure this boundary by treaty, the Persians may yet encroach to the eastward of the line, in the same way that they have encroached during the last twenty years. It is most respectfully represented that the Telegraph offers a means of interference on our part in this matter which may not again be available.

F. J. GOLDSMID, Lieut. Colonel,
Superintendent Indo-European Telegraph.

ROUGH DRAFT OF PROPOSED CONVENTION.

I. That the Land Line be constructed, connecting the port of Gwadur with the Persian line, passing from Ispahan through Yezd, Kerman, and Bunder Abbas, and thence following the coast.

II. That the line be constructed by the Persian government as far as Bunder Abbas, with the aid and under the superintendence of the British officers now employed in Persia under the Convention of the 23rd November 1865. Materials to be supplied on the terms specified in the said Convention, but 17,000 iron posts to be presented, free of cost, by the British Government.

The iron posts would form the main expenditure, the other materials being of comparatively trifling cost. But the Persians would wish it shown that *they* paid for them.

III. That the line from Ispahan to Bunder Abbas be of two wires, on the understanding that on all requisitions from the English Director in Persia, one of these be placed at his disposal for Indo-European communication, the charges being the same as for the proportion of cable from Bushire to Bunder Abbas.

IV. That on the establishment of Yezd and Kerman respectively there shall be two clerks well acquainted with the English language, and otherwise competent to conduct the correspondence, in the event of the wire being required as contemplated in the above Article.

V. That the line from Bunder Abbas to Gwadur be constructed and maintained at the expense of the British Government, by arrangement with His Highness the Imam of Muscat and chiefs of Beloochistan, for such portions of the coast as may be under their control respectively; the above arrangement in no way affecting the question of Persian sovereignty.

Or by arrangement, as to details, with the Khan of Kelat, for such portions of the coast as may be under his control, and with His Highness the Imam of Muscat and chiefs of Beloochistan for the remainder; no part of such arrangement affecting in any way the question of Persian sovereignty.

VI. It is, however, stipulated that no political interference will be exercised by the government of Persia in the port of Gwadur or the State of Khelat, or any other port of the coast east of the Dast Khor in the bay of Gweltur.

This is the exact point to which it was supposed, on the occasion of former inquiries, that Persian encroachment to the east had extended, and the status has now been confirmed.

F. J. GOLDSMID, Lieut. Colonel,
Superintendent Indo-European Telegraph.

PUBLIC INSTRUCTION.

Changes in the Department.

Mr. E. I. Howard, late Director of Public Instruction, having resigned his appointment on the 23rd June 1865, Sir A. Grant, Principal of the Elphinstone College, was promoted to be Director of Public Instruction.

2. Consequent on this promotion, Mr. K. M. Chatfield, B.A., of Corpus Christi College, Oxford, was appointed by Her Majesty's Secretary of State to be Principal of the Elphinstone College, and joined his appointment on the 29th March 1866.

3. Dr. Martin Haug, Superintendent of Sanskrit Studies in the Poona College, in conformity with notice given by him last year, retired from his appointment on the 15th of January 1866.

4. Dr. Franz Kielhorn, of the University of Leipsic, was appointed by the Secretary of State to succeed Dr. Haug, and arrived in Bombay on the 27th February 1866.

5. Owing to the decease of Mr. E. P. Steevenson, Head Master of High School, Ahmedabad, and Principal of Gujarat Provincial College, Mr. W. H. Smith, Principal of Poona Vernacular College, was appointed to these vacancies.

6. Mr. A. Barrett having been appointed by the Secretary of State to succeed Mr. Steevenson in his previous appointment of Head Master of the Elphinstone Institution (now styled Vice-Principal of the Elphinstone High School), joined his appointment on the 4th of August 1865.

7. On the promotion of Mr. W. H. Smith, Mr. Krishna Shastri Chiplonkar was appointed Principal of the Poona Vernacular College (now styled Poona Training College).

8. Mr. H. S. Bellairs having been previously appointed by the Secretary of State to be Head Master of the Belgaum (Sirdars) High School, took up this appointment on the 16th of January 1866.

9. Mr. F. W. Wilson, previously Acting Head Master of the Belgaum High School, was then transferred to be Head Master of the Surat High School, an appointment which had been for several months vacant.

10. At the beginning of the official year Mr. Ramkrishna Gopal Bhandarkar, M.A., of the Bombay University, was appointed Head Master of the Rutnagherry High School in succession to Mr. G. Russell resigned.

11. On the 1st of February 1866 Mr. Vithal Narayen Patak was appointed Head Master of the Dhoolia High School, vice Mr. W. Burton superseded.

12. On the 16th October 1865 Mr. W. Jeaffreson, Principal of the Elphinstone High School, having proceeded to Europe on sick certificate, Mr. W. Draper, Assistant Educational Inspector Central Division, was appointed to act in the vacant appointment.

13. On 1st February 1866 Mr. J. Nugent, C.S., was appointed to act as Assistant Educational Inspector Central Division.

14. On the 14th of October 1865 Dr. H. Giraud having resigned the appointment of Principal in the Grant Medical College, was succeeded by Surgeon R. Haines, M.B.

15. On the 26th of April 1866, owing to the lamented decease of Dr. Haines, Assistant Surgeon W. G. Hunter was appointed to the vacant Principalship.

16. On the 16th of March 1866 Dr F. S. Stedman, Professor of Medicine in the Grant Medical College, having gone to Europe on sick leave, Dr. A. N. Hojel was appointed to act in the vacant appointment.

17. In both Marathi and Gujarati Translators' office changes have occurred, Mr. Mahadeo Govind Ranade, LL.B., having been appointed to act as Marathi Translator for Major T. Candy, gone to Europe on sick leave, and Rao Saheb Mahiputram Rupram Lilkant having been appointed Gujarati Translator, vice Mr. T. B. Curtis previously promoted to be Educational Inspector. In short the above list shows a remarkable disturbance during the year in the superior appointments of the department.

18. The actual Expenditure during 1865-66 has been as follows:—

	From Imperial Funds.			From Local Funds.		
	Rs.	a.	p.	Rs.	a.	p.
Direction and subsidiary charges ..	*46,809	3	2	280	0	0
Inspection and ditto	†1,18,156	10	1	5,658	6	7
Instruction (including all Educational expenditure not coming under the above heads.).....	‡7,05,102	7	10	8,38,294	13	4
Total ....Rupees	8,70,068	5	1	8,44,233	3	11

* This includes salaries and travelling allowances drawn by Director of Public Instruction and his establishment, also the amounts spent on contingencies, books issued gratis, and patronage of literature.

† This includes salaries drawn by Inspectors, Assistant Inspectors, Deputy Inspectors, and Assistant Deputy Inspectors and their respective establishments, also travelling allowances and contingencies.

‡ This includes salaries of Professors, Masters, &c., Scholarships, expenses of the Book Department, Translation Department, grants for building school-houses, &c., grants-in-aid to private Institutions, contingencies and charges from Dakshina Fund, and other miscellaneous charges.

19. The foregoing table shows an increase upon last year's expenditure of Rs. 1,60,327-10-1, Imperial Funds; and Rs. 3,49,951-15-5, Local Funds.

20. The increase of expenditure from Local Funds is resolvable into—

1. Receipts from Local cess.
2. Do. from Fees.
3. Do. from Popular Contributions, as follows:—

Local Cess.

	1864-65. Rs.	a.	p.	1865-66. Rs.	a.	p.
Central Division....	1,11,044	6	2	1,44,541	9	0
Northern ditto	98,541	5	10	1,55,502	11	11
Southern ditto	5,773	4	2	13,480	4	3
Sind ditto	....			.....		
Total....	2,15,359	0	2	3,13,524	9	2
Deduct Cess for 1864-65				2,15,359	0	2
Net increase in 1865-66				98,165	9	0

Fees.

	1864-65. Rs.	a.	p.	1865-66. Rs.	a.	p.
Central Division...	81,128	12	7	96,354	12	4
Northern ditto	19,026	13	6	21,060	13	6
Southern ditto	8,022	3	3	10,228	2	6
Sind ditto	689	7	1	1,044	5	6
Total....	1,08,867	4	5	1,28,688	1	10
Deduct Fees for 1864-65				1,08,867	4	5
Net increase in 1865-66				19,820	13	5

Popular Contributions.

	1864-65.			1865-66.		
	Rs.	a.	p.	Rs.	a.	p.
Central Division	35,720	6	10	52,806	15	5
Northern ditto	15,376	3	4	30,689	14	2
Southern ditto	12,474	4	7	23,316	7	9
Sind ditto	18,773	10	0	35,493	2	5
Total	82,344	8	9	1,42,306	7	9
Deduct Popular contributions for 1864-65.				82,344	8	9
Net increase in 1865-66				59,961	15	0

21. As the results of the Educational expenditure in the Bombay Presidency we have as follows :—

	Number on the Roll.	Average daily Attendance.
At Colleges affiliated to the University (*i.e.* Elphinstone, Poona, and Grant Medical Colleges and Law Schools)	279	267·4
At Colleges not affiliated (*i.e.* Gujarat Provincial)	46	34·
At Higher Class Schools (*i.e.* Elphinstone, Poona, Ahmedabad, Belgaum, Surat, Rutnagherry, Dhoolia, Hydrabad, & Kurrachee.	1,741	1557·5
At Middle Class Schools (*i.e.* First Grade and Second Grade Anglo-Vernacular Schools)	23,668	17,985·8
At Schools of the lower class (*i.e.* Vernacular or Primary including Schools established from the local cess)	66,889	48,960·2
At Female Schools (*i.e.* 1 at Rutnagherry, 1 at Dhoolia, 1 at Sattara, 7 in Ahmedabad, 8 in Surat, 9 in Kaira zillas, and 11 in the Kattywar province, some of which are mere classes)	1,036	406·3
At Normal Schools (*i.e.* Poona, Ahmedabad, Surat, Belgaum, and Hydrabad)	259	194·5
At other Schools for special education (*i.e.* Poona Civil Engineering College and Engineering School at Kurrachee)	80	73·

The above table gives a rough aggregate of 93,998 scholars on the rolls, and an average daily attendance of 69,498·7 These numbers being taken as divisors of the total expenditure (less the item of grants-in-aid) show an expense of Rs. 15-2-9 per head per annum for pupils on the rolls in Educational Institutions under the direct control of this department, with a cost of Rs. 20-8-3 per head for the average daily attendance during the year.

22. The grants-in-aid to private institutions have amounted during the year to Rs. 54,915-8-3. This sum has been awarded as follows:—

(a) *On the system of payment for results.*

Indo-British Institution, Bombay	461	0	0
Convent School, Poona	1,505	0	0
Pensioners' School, Belgaum	410	0	0

(b) *Not on the system of payment for results.*

Grant to schools in connection with Sir Jamsetjee Jejeebhoy Parsee Benevolent Institution.....	6,000	0	0
Do. to schools of Honourable Rustomjee Jamsetjee Jejeebhoy	3,500	0	0
Do. to Sir Jamsetjee Jejeebhoy School of Arts and Industry	19,302	15	2
Do. to David Sassoon Industrial and Reformatory Institution	6,211	0	11
Do. to Sorabjee Furdunjee Parak's School of Arts at Surat	1,000	0	0
Do. to Kurrachee European and Indo-European Institution	960	0	0
Do. to St Patrick's School, Kurrachee	600	0	0
Do. to Bombay Education Society's Schools, Byculla	8,565	8	2
Do. to Egutpoora School	5,500	0	0
Do. to Poona Female Schools	900	0	0
Total.... Rs.	54,915	8	3

The total number of pupils in these aided Institutions has been 4,081,* which number Government has had a share in educating, in addition to the pupils in its own schools, at a cost of Rs. 13-7-3 per head.

23. The results of the High School education in this department, as shown by the numbers matriculated in the University during the year, has been as follows:—

Institution.	Number Matriculated in December 1865.
Elphinstone High School	18
Poona High School	25
Ahmedabad High School	7
Surat High School	6
Belgaum High School	5
Rutnagherry High School	4
Dhoolia High School	4
Hydrabad High School	1
Total	70

24. Besides the above, one student of the Broach English School (which is below the rank of High School) was matriculated.

* This is exclusive of the following Schools of which no returns have yet been received:—

Belgaum Pensioners' School.
Kurrachee Indo-European School.
Egutpoora School.

25. The results of the Collegiate education in this department, as shown by the numbers who have passed the higher University examinations during the year, is as follows:—

First Examination in Arts.

College.	Numbers passed.
Elphinstone College	13
Poona College	12

B. A.

Elphinstone College	10
Poona College	3

M. A. *or Honours in Arts (entitling to* M. A. *degree.)*

Elphinstone College	4
Poona College	5

First Examination for **L. M.**

Grant Medical College	4

Examination for degree of **L. M.**

Grant Medical College	1

LL.B. *degree.*

Government Law School	2

26. The increase of schools and scholars is shown as follows:—

	Number of Schools.				Number of Scholars.			
	1864-65.	1865-66.	Increase.	Decrease.	1864-65.	1865-66.	Increase.	Decrease.
High Schools	9	9	..	..	2,181	1,741	..	440
Middle Class Schools	134	166	32	..	18,310	23,668	5,358	..
Lower Class Schools.	922	1,108	186	..	49,273	66,889	17,616	..
Female Schools	23	33	10	..	639	1,036	397	..
Normal Schools	6	6	..	..	166	259	93	..
Special do.	1	2	1	..	67	80	13	..
Total. ...	1095	1,324	229	..	70,636	93,673	23,477	440

Total Increase .. { Schools .. 229 / Scholars .. 23,037

27. This increase is resolvable into—

	Schools.	Scholars.
Increase in Central Division	76	10,003
Ditto in Northern Division	121	10,159
Ditto in Southern Division	31	2,689
Ditto in Sind	1	186

Book Department.

28. The operations of the Book Department during the year have been as follows:—

The amount paid into the Treasury (including the adjustment made on account of books issued gratis, amounting to Rs. 1,962-2) is Rs. 98,904-9-4, against the sum of Rs. 79,995-13-10 drawn. Of the sum drawn, Rs. 8,831-3-4 were expended on the "Encouragement Account," and therefore the sum drawn for the strict purposes of the Depôt is Rs. 71,164-10-6. The sum paid exceeds the sum drawn for purposes of Depôt by Rs. 27,739-14-10, *i.e.* more than one-third the sum drawn.

29. The following is a table showing the sums drawn from and paid into Her Majesty's General Treasury by the Book Department during the last three years:—

	Amount Drawn.			Amount Paid.		
	Rs.	a.	p.	Rs.	a.	p.
1863-64	71,242	5	7	81,557	8	1
1864-65	80,117	2	11	93,756	2	3
1865-66	79,995	13	10	98,904	9	4

30. The following particulars will show the number and value of the books issued from the Central Book Depôt during the year:—

	Number of Copies.	Amount.		
		Rs.	a.	p.
1. Books sold for cash in the Central Book Depôt.....	34,488	15,183	12	11
2. Books issued on credit.....	44,295	19,328	13	5
3. Books issued to the subordinate Depôts for sale.....	2,73,049	81,173	4	8
4. Books issued for printing new editions.....	24	7	5	0
5. A copy of Jerdon's Birds of India, 3 volumes, issued to the Government of Bombay, as per Director of Public Instruction's letter No. 1697, dated the 27th January 1866.....	1	21	0	0
Total....	3,51,857	1,15,714	4	0

This shows an increase on the preceding year of 86,214 in the number of books issued and Rs. 26,235 in their value.

31. Out of the sum of Rs. 15,000 set apart for the encouragement of literature, Rs. 8,831-3-4 have been expended as follows:—

A.

Copyright and Printing of Books.

	Rs.	a.	p.
*Suras Kathegalu Sungraha.....	1,350	0	0
Dhatu Kosha (A Dictionary of Sanskrit roots).....	2,150	9	4
Vrita Darpan (a work on metres).....	300	0	0
Auvasadi Vidya (on Materia Medica)....	1,000	0	0
Rasayan Shastra (Text Book of Chemistry)	1,434	8	0
Laghu Vyakaran (Elementary Marathi Grammar).....	500	0	0

B.

Purchase of Books.

		Rs.	a.	p.
*	Bharut Champu Satik	108	0	0
*	Pingala Darsâ.....	280	0	0
*	Arabi Bhashetil Suras va Chamatkarika Gosti, Bhag. V. (Arabian Nights)..	135	0	0
*	Duncan's Geography of India	50	0	0
*	Gayan Satâk, Bhag III.....	63	12	0
*	Vrita Ratnakar	28	2	0
*	Namartha bodha.....	150	0	0
*	Padya Ratnavali.....	202	8	0
	Jatibheda Viveksar (a work on caste)..	150	0	0
*	Sulochana Ani Madhava (a Marathi Novel)	475	0	0
	Mukta Mâlâ (a Marathi Novel, 2nd Edition)	213	12	0
*	Educational Record	90	0	0

Resolutions of Government on Education.

32. The chief Resolutions of Government affecting the Educational Department during the year have been as follows :—

(a) No. 459 of 7th July 1865, sanctioning a change in the functions of Poona Vernacular College, which is henceforth to be confined to the training of Schoolmasters, and to be called the "Poona Training College."

(b) No. 684 of 14th October 1865, fixing the application of Local Educational Funds to Primary Education in the first instance.

NOTE.—The books marked with an asterisk (*) were purchased under orders previously given by Mr. Howard.

(c) No. 91 of 10th February 1865, sanctioning Provisional Revised Rules for Grants-in-aid on the system of payment for results.

Alterations in the Department introduced by the Director of Public Instruction.

33. The chief alterations in the department introduced by the Director have been as follows:—

(a) A Rule excluding all unmatriculated students from the Government Arts-Colleges.

(b) A Rule laying down a standard for entrance into High School.

MEDICAL DEPARTMENT.

During the year 1865-66 the building at Bombay of the Hospital for the treatment of diseases of the eye has steadily advanced, and it is expected that it and the adjacent Hospital for Incurables (Lepers) will be ready at an early date for the reception of patients. The number of cases treated for eye disease was 3,032, and operations performed during the year numbered 312.

2. The arrangements for the projected Native General Hospital to be situated on the Esplanade in the vicinity of a thickly populated part of the Native Town are in an advanced state. The plan for the building has been approved of.

3. At the rising town of Callian, in the North Concan, the Rookminabaee Dispensary was formally opened in August 1865, and has already been of considerable service. By request of the founder it will be known in future as "Mrs. Munguldass Nuthoobai's Dispensary."

4. The new Civil Hospital at Poona named the "David Sassoon Hospital" is not yet finished, but much progress has been made towards its completion during the year. The management of the Dispensaries in the Poona Division has been reported on very favourably. They have afforded relief to upwards of 7,000 more of the poor than in the previous year.

5. In the Northern Division the number of persons who have sought aid from the Dispensaries has exceeded that of the previous year by upwards of 10,000. At Ahmedabad the Bechurdass Dispensary was opened on the 1st January 1866. Under the Rajkote Agency two Dispensaries have been

opened by Native Chiefs—one at Wudwan and one at Manekwaree; both these Dispensaries are administered by pensioned Hospital Assistants.

6. In the Southern Maratha Country the provisional Dispensaries at Bunkapoor and Kyga Ghaut were withdrawn, the works at these spots being temporarily stopped. A Dispensary at Parpoolee Ghaut was opened in December for the use of the Public Works Department. The relief afforded by Dispensaries in the Southern Maratha Country during the year exceeds that of the previous year.

7. In Sind the Fort at Bukkur has been occupied as a Subsidiary Jail. Its accessibility by rail and river renders the situation one of importance in Jail sanitation.

8. The total number of persons treated in Hospitals and Dispensaries during the year under report was 284,468 against 251,143 for the preceding year. Of this number 238,971 were relieved through the instrumentality of Dispensaries. In the Civil Hospitals throughout the Presidency, including the Jamsetjee Jejeebhoy and the European General Hospitals in Bombay, 22,802 patients were treated during the year, of which 1,505 were in the European General Hospital and 5,225 in the Jamsetjee Jejeebhoy Hospital.

9. In the several Police Hospitals the total number of cases was 8,836; the proportion of treated to strength was nearly 47 per cent. against 41·43 of the previous year.

10. The proportion of deaths to treated in the Civil and Police Hospitals was as follows :—

European General Hospital.....	9·90
Jamsetjee Jejeebhoy Hospital	30·34
Civil Hospitals	6·77
Police Hospitals.....	1·60

11. In Jail Hospitals the number treated during the year was 13,859 against 9,493 of the previous year. The

ratio of treated to strength was 182 per cent. and the mortality to the number treated was nearly 5 per cent.

12. The Government Charitable and Municipal Dispensaries have been extensively resorted to. The increase in the number attending these charities during the year is gratifying as showing the appreciation in which they are held by the people, 238,971 persons having been treated against 210,192 of the previous year.

13. The progress of Vaccination during the year under report has been very great. The total number of persons vaccinated amounted to 357,247 against 337,889 of the previous year.

Of the vaccinated during the year—

71·56	per cent. were	Hindoos.
22·31	do.	Mussulmans.
5·24	do.	other Castes.
0·58	do.	Christians.
0·30	do.	Parsees.

14. This most important branch of our administration has received material aid by the cöoperation of the Municipalities, who have entertained many additional Vaccinators out of their revenues.

SURVEYS.

REVENUE SURVEY.

SOUTHERN MARATHA COUNTRY.

All the Government villages of the Southern Maratha Country Collectorates, namely, Sattara, Belgaum, Kulladghee, and Dharwar, have been some years back brought under the survey settlement. Recent survey operations in these collectorates have been confined to the villages of Enamdars, who from time to time request the survey of their villages, generally requesting settlement also, and promising to abide by it, but sometimes reserving to themselves the power of modifying the rates of assessment, in which case they are required to pay the expenses of the survey. At the close of the year preceding that under report several of the Sattara Jagheerdars, acting under the advice and influence of Mr. Chapman, late Collector of that district, requested that their estates might be surveyed and settled, providing merely that they should be consulted regarding the rates of assessment to be levied, which they might be at liberty to adopt or reject, in the latter case making good to Government the cost of the survey. In case of adopting the rates they engaged to guarantee them to their ryots, and also to concede to them all the advantages of proprietary right which are ensured to the ryots in Government villages by the Survey Act. In the course of the year under report this movement has extended, and three of the Jagheers subject to the Kolapoor State are now under survey—Toragul, Inchulkurunjee, and Kagul,—and the Chief of Jumkhundee has recently expressed his desire that one of his talookas situated in the Dharwar collectorate should be surveyed, though whether

he will concede any fixed settlement to his ryots remains still to be seen.

2. The advantages of the above movement among the Jagheerdars will be incalculable both to the Jagheerdars themselves and in a still greater degree to their ryots. The Jagheerdars will secure a certain, and in most cases an increased revenue. The people will be secured from arbitrary increase of taxation, and from ejectment from their lands on declining to accede to such arbitrary increases. During the high prices which have prevailed of late years most of the Jagheerdars have raised their revenues greatly, not by general increases based upon any ascertained valuation of the soil, but by getting as much as they could from all who could not by fair means or foul evade payment, and by calling up the outstanding balances which form so convenient a part of Maratha revenue administration. Their gross revenue has thus, during the last year or two, been much increased, but principally by pressing upon the less influential class of cultivators. In one Jagheer Talooka, the settlement of which has just been completed—the Seerhuttee Talooka of the Sanglee Chief's Jagheer—the revenue has been raised from Rs. 66,468, collected in 1863-64, to upwards of Rs. 85,000, the former sum being the largest which the Jagheerdar had ever succeeded in realising, and did not in fact get in without causing considerable dissatisfaction among a large portion of his ryots. The revised assessment is placed on the land without reference to the position or influence of the ryot holding it, and conveys a secure tenure, and thus a considerable increase of revenue has been secured for the chief, and the people appear to be completely satisfied.

3. There is the additional advantage in these settlements, namely, that the people derive and hold their title and tenure, which is a more secure one than they ever possessed before, from the British Government, which cannot but increase

their well affection towards it, and give them a direct interest in its stability.

4. Besides the survey of Jagheer and Enam villages there has been made as much progress in North Canara as the short healthy season would admit. Forty-one villages have this year been settled, with the result of very nearly doubling the revenue, and with an entire absence of complaint or dissatisfaction. In fact Government waste land assessed at the survey rates, of which the "occupancy" or ownership subject to the payment of the survey assessment, was, in consequence of there being numerous applicants for it, put up to auction among the villagers, and brought in numerous cases sums varying from 1 to 80 times the survey assessment; 26 survey fields situated in six villages were in all thus sold by auction, containing 196 acres, bearing survey assessment Rs. 89-12, and brought Rs. 1,055, or an average of $11\frac{3}{4}$ times of the total survey assessment.

TANNA AND RUTNAGHERRY.

5. The operations of this department during the year were spread over the Poona and Conkan districts. In Poona the work was almost entirely confined to a re-survey of the Indapoor Talooka, preparatory to the revision of the thirty years' settlement lease, which expires at the termination of the current year.

6. The revenue survey system as hitherto carried out in the Presidency has been confined for the most part to a detailed field measurement made with the cross-staff and chain, the theodolite being used only for the measurement of tracts of hilly country. The system has been sufficient for the purpose of furnishing an accurate land measurement, which was the main intention of the originators of the measure.

7. In commencing a fresh survey it has been considered advisable to carry out a system of operations which, whilst

preserving the objects of the former plan, would at the same time provide for a detailed survey of the country such as could be utilised by the Trigonometrical Survey in the preparation of their maps. In view therefore to a combined system of operations of this nature being carried out, the boundary of each village has been surveyed with the theodolite upon the traverse system and Gales' method of surveying.

8. This plan of survey, which was partially introduced in Indapoor last year, has been in regular operation during the present. It promises to be productive of the best results; for the traverse not only acts as a check upon the detailed field survey of the village, but furnishes the data for the preparation of an accurate talooka map. And moreover the maps will hereafter supply to a considerable extent the data required for the interior details of the Trigonometrical Survey.

9. In the other operations of this department there is to be noticed the first introduction of a revenue settlement into one of the districts of the Rutnagherry collectorate. Its introduction had been deferred for some time as it was deemed advisable to provide by legislation a plan of settlement suitable to the peculiar tenures of this part of the Konkan. The provisions required for carrying out the settlement having been embodied in the Revenue Survey Act, the Superintendent was enabled to introduce the first settlement during the current year.

10. The Superintendent also reports the introduction in one district of the Tanna collectorate of a new system of levying revenue for the right of tapping date trees, and selling the liquor manufactured from the raw juice of the tree. The advantage of the new over the former system consists in the substitution of a fixed rate of payment for all the trees in each field or allotment, in place of the old plan of an annual tree tax fixed with reference to the number actually utilised.

11. In a district where date trees are numerous, and grow in dense masses it will readily be supposed that it was next to impossible to obtain an accurate account of the actual number of trees utilised by each individual. It was an obvious advantage therefore to get rid of such a plan of management. The new system not only provides for this, but introduces great improvements in the Abkaree management by effecting a considerable reduction in the number of liquor shops, and placing such as are allowed under a more efficient supervision.

KHANDEISH SURVEY.

12. The only circumstance in the year's operations of this department which seems to deserve special notice is the general extension of the survey to the wild tract of jungly country bounding the northern part of the Khandeish collectorate. With the exception of here and there a few spots inhabited by the Bheels, the country referred to is generally uninhabited.

13. The Superintendent experienced considerable difficulty in the prosecution of the survey not only from the want of inhabitants to aid in his ordinary operations, but from the unhealthy nature of the climate. His establishments were decimated by fever, and so great is the dread of the climate that it was with the utmost difficulty any fresh hands to replace those incapacitated by sickness could be obtained for service there.

14. Good progress was made in settlement operations during the year, two entire talookas, together with 75 villages of another, having been added to the list of settled districts.

GUJARAT.

15. This survey continues under the able and careful superintendence of Major C. J. Prescott.

Measurement.

16. The measurement of the whole of Gujarat Proper is very nearly completed, and satisfactory progress has been made in two of the five talookas of the Punch Mahals.

17. The total area measured in the year under report was 347,141 acres.

Revision of assessment and settlement.

18. Revised rates of assessment were introduced in the Bardolee, Chicklee, and Chowrassee talookas of the Surat Collectorate and in the Nurriad Talooka of the Kaira Collectorate.

19. In the Bardolee Talooka the average rate has been raised.

20. Compared with the old rates the survey has raised the assessment of occupied land in this talooka as follows:—

On the ten years' average .....Rs. 89,752, or 33 per cent.
On the collections 1863-64 ..... „ 52,750, or 17 per cent.
On the area cultivated in 1864-65,
according to the old rates .... „ 37,710, or 11 per cent.

Talooka Chicklee.

21. In Chicklee also the revenue has profited by the introduction of the revised rates.

According to the old system the assessment of Government land was ....Rs. 1,98,948
According to the survey system it is ..... „ 2,56,264

Showing an increase of .....Rs. 57,316
which is a rise of a little more than 28 per cent.

Talooka Chowrassee.

22. The old assessment of the Talooka Chowrassee was exceptionally heavy, and had very unequal incidence. The effect of the survey system has been to equalise the assessment, not to raise it.

According to the old system the assessment of occupied Government land was.. Rs. 1,36,813
According to the survey system it is.. „ 1,37,026

Showing an increase of ..... Rs. 213 only.

Nurriad Talooka.

23. The result of the introduction of the revised rates of assessment in the Nurriad Talooka cannot be correctly stated till the actual figures are received on the accounts being made up, but it is estimated that the assessment of Government land in this talooka will be raised by the revision about Rs. 25,000, or 11 per cent.

City and Town Surveys.

24. The detailed survey of the city of Ahmedabad, and of the towns of Surat, Broach, and Bulsar, is progressing very favourably, and in the city of Ahmedadad the settlement of claims to land, and registration of the same, is being rapidly effected.

25. The total cost of the Gujarat Revenue Survey for the year amounted to Rs. 1,85,669.

SIND SETTLEMENT SURVEYS.

26. The reorganisation of these departments upon the strength sanctioned by the Supreme Government has been nearly completed during the year, there being now seven Assistants in the Right and six in the Left Bank Settlement department, and six Field Establishments in each. A regular system of field operations has been established, and the survey and settlement are now being carried on upon a systematic plan.

27. The operations of the year comprise the following work :—

The measurement of an area of 847,868 acres.
The classification do. 275,957 do.
The settlement of.....91 dehs or villages.

28. A special Act has been passed by the local Legislative Council providing for the extension to Sind of such parts of the Act framed for regulating the general conduct of surveys, and for giving a legal status to revenue settlements as are applicable to that province. This measure will remove

the difficulties which the settlement officers have heretofore experienced in the conduct of their work, whilst at the same time it is calculated to ensure public confidence in the settlements; and this was much needed as the several failures which had attended the first revenue settlements had created a distrust of settlement operations generally.

SURVEY OF THE TOWN AND ISLAND OF BOMBAY.

29. The plan of survey was projected by Colonel Walker, the Superintendent of the Great Trigonometrical Survey of India. It comprised a combined system of operations to be carried out by the Trigonometrical and Revenue Survey departments conjointly. In the division of work the Trigonometrical Survey is to undertake the important duty of triangulating the Island, and fixing points at short distances apart. It is also to exécute a series of traverses to be closed on the trigonometrical stations. The points thus fixed are to form the basis for subsidiary traverses, and detailed chain measurements to be made by the Revenue Survey Department.

30. The survey was commenced upon this plan about the 1st of November by a party of the Trigonometrical Survey under the charge of Captain Nasmyth and a Revenue Survey Establishment under Captain Laughton. The field work of triangulating the Island was completed by the close of the year, and considerable progress has been made in the detailed survey operations of the Revenue Survey Department.

31. Considerable difficulties, as was to be expected, were experienced by the Trigonometrical Survey officers in extending their triangulation over the thickly-inhabited parts of the town; but by a conciliatory manner towards native householders, and by the adoption of precautionary measures on the part of the officer charged with the conduct of the operations, the work has been successfully carried out without a single complaint against the department.

TOPOGRAPHICAL.

SIND.

32. The area surveyed during the year is as follows:—

	Acres.	Sq. inches.
"Mouzawar" surveyed in detail—scale ¼ mile to an inch	967,987·20	= 1,512·48
"Topographical"—scale 1 mile to an inch	641,715·20	= 1,002·68
Total ..	1,609,702·40	= 2,515·16

33. The detail survey shows an increase of 166·63, and the Topographical a decrease of 2,497·32 square miles compared with the year 1864-65. The total amount is more than the ordinary return for a season, but the Revenue Surveyor reports that "more might have been accomplished had the establishment not been detained to a late period in quarters bringing up the heavy mapping of an extensive area measured last season."

34. During the year the talookas of Hydrabad, Alyar-ka-Tanda, and Meerpoor in the Hydrabad Collectorate, and Talooka Kippra in the Thur and Parkur Political Superintendency, were completed. Work in the talookas of Mohbut Dhera and Goonee has been commenced.

35. The following Maps have been compiled:—

1 Index Map of season 1864-65, scale 4 miles to an inch.

1 Map Talooka Meerpoor, scale 1 mile=1 inch.

1 Do. do. Kippra plain, scale do. do.

1 Do. of southern portion of Talooka Alyar-ka-Tanda, scale do. do.

5 Large Maps, Nos. 6 to 10, of part of the desert of Comerkote, scale 1 mile = 1 inch.

9 Large Maps for Surveyor General.

9 Maps, duplicate of the above, for the Civil Authorities.

In all 18 Maps.

6 Volumes Atlas Sheets, scale 20 Gunter's chains or $\frac{1}{4}$ of a mile to an inch.

1 Do. Main Circuit computations.

6 Do. Register's traverses.

FORESTS.

From the annexed comparative statement of Forest Receipts and Expenditure for the years 1864-65 and 1865-66 it will be seen that the total Receipts for the latter year amounted to Rs. 7,30,347-7-10, being a decrease compared with the preceding year of Rs. 86,320-12-5.

2. The actual Expenditure for the same perod is Rupees 6,33,916-1-10, being nearly double that of 1864-65 and four times greater than in any previous year, amounting in fact to about 85 per cent. of the total receipts.

3. The chief deficiency in Forest revenue has been in the Surat and Canara districts, where, owing to the general depression of trade, the demand for timber has been very small, and large stocks have consequently remained unsold. Poona and Sattara still continue to show a large expenditure in excess of the receipts.

4. Up to 1864, when the payment to informers out of the fines was declared illegal, the amount of fines ranged between Rs. 500 and Rs. 700 per annum, but since this objection has been removed offences to the number of several hundreds have been brought to light. The convictions in the year under report number 382. The value of the property stolen amounts to Rs. 3,875, and the fines to Rs. 7,731, being a greater amount in one year than the total sum for the twenty previous years. The number of informers is 374, of whom 155 had no connection with the department.

SIND.

5. The subjoined comparative statement exhibits the financial condition of this department:—

	1864-65.	1865-66.
Receipts	2,66,277 14 8	2,68,104 12 1
Disbursements ..	1,60,762 0 4	1,59,055 12 10
Net profit .. Rs.	1,05,515 14 4	1,09,048 15 3

6. The above shows an increase for the year under report over last year of Rs. 3,533-0-11. This sum would have been considerably larger but for the payment of compensation, amounting to Rs. 7,680, on account of claims of long standing to land included within Forest limits which have recently been adjudicated.

STATEMENT

OF

RECEIPTS AND EXPENDITURE

(FORESTS).

COMPARATIVE STATEMENT of RECEIPTS *and* EXPEN
for the years 1864-65.

COLLECTORATES.	RECEIPTS.				EXPEN			
					ESTABLISHMENT.			
	1864-65.		1865-66.		1864-65.		1865-66.	
	Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.	
Surat	1,01,515	14 5	35,776	10 11	15,167	8 5	1,32,055	11 10
Khandeish	57,177	4 5	52,264	15 11	14,188	5 7	13,917	13 11
Ahmednuggur	51,804	2 7	15,145	5 0	7,424	1 5	6,821	9 11
Rutnagherry	13,592	14 8	15,933	5 4	9,800	3 5	3,821	7 10
Belguam	27,236	11 6	30,926	12 8	12,632	1 5	7,886	1 6
Dharwar	27,006	11 10	17,107	9 4	3,247	1 7	1,937	14 4
North Canara	4,19,724	0 2	2,39,954	6 8	25,178	9 3	26,325	0 3
Tanna (principal Division)	25,001	9 5	1,61,454	4 4	21,461	9 4	30,412	0 6
Tanna (subdivision Colaba)	66,222	4 5	94,519	7 1	5,567	14 2	13,231	2 4
Poona	24,608	11 11	35,259	15 6	37,176	2 3	36,304	8 11
Sattara	2,777	14 11	2,004	11 1	4,458	6 11	6,397	3 2
Total Rs.	8,16,668	4 3	7,30,347	7 10	1,56,092	14 0	1,60,310	10 6

EXPENDITURE *of the* FOREST DEPARTMENT, BOMBAY, *and* 1865-66.

DITURE.												PROFIT.			LOSS.		
CONTINGENT CHARGES.						TOTAL.											
1864-65.			1865-66.			1864-65.			1865-66.			1865-66.			1865-66.		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
28,421	1	11	1,39,315	15	7	43,588	10	4	1,52,521	11	5	....			1,16,745	0	6
36,982	1	0	21,114	5	8	51,170	15	7	35,032	3	7	17,232	12	4	....		
13,356	9	0	4,833	9	2	20,780	10	5	11,655	3	1	3,490	1	11	....		
3,464	9	1	2,786	6	2	13,264	12	6	6,607	14	0	9,325	7	4	....		
1,180	1	3	1,760	8	[illegible]	13,812	2	8	9,646	9	9	21,280	2	11	....		
173	8	0	5,107	12	7	3,420	9	7	7,045	10	11	10,061	14	5	....		
49,678	13	3	2,09,121	15	10	74,857	6	6	2,35,447	0	1	34,507	6	7	....		
69,223	2	8	43,600	3	1	90,684	12	0	74,012	3	7	87,442	0	9	....		
16,501	12	0	38,753	15	7	22,069	10	2	52,035	1	11	42,484	5	2	....		
16,807	4	2	6,311	4	7	53,983	6	5	42,615	13	6	....			7,355	14	0
391	3	11	899	6	10	4,849	10	10	7,296	10	0	....			5,291	14	11
2,36,389	13	0	4,73,605	7	4	3,92,482	11	0	6,33,916	1	10	2,25,824	3	5	1,29,392	13	5

Balance in favour of Government.....	96,431	6	0
Amount of sales Calicut Agency	15,126	14	2
Ditto Bombay Depôt	2,064	12	6
Grand Total.... Rs.	1,13,623	0	8

EMIGRATION.

In consequence of the excessive mortality* which occurred on board the emigrant ship *Indomitable* during her voyage from Bombay to Mauritius, which extended from 17th January to 24th February 1865, as well as of the high rate of mortality which prevailed generally in connection with the emigration from Bombay in 1864, all emigration to the Mauritius was, under instructions received from Her Majesty's Secretary of State for India, discontinued pending inquiry.

2. Dr. Leith, the President of the Sanitary Commission, was requested to favour Government with his opinion, not only as to the causes of the excessive mortality, but also as to the best means to be adopted to guard against a recurrence of it.

3. After a searching inquiry he reported the main causes to have been—

1*st*.—The bad accommodation at the depôt.

2*nd*.—The prevalence of remittent fever among the poorer classes in Bombay at the time of the emigration.

3*rd*.—The overcrowding of the ship.

4*th*.—The incompetence of the surgeons.

4. The conclusions arrived at by Dr. Leith were communicated to Mr. Marsh, the Special Commissioner from the Mauritius, who had in the meanwhile arrived at Bombay, with an intimation that the restriction would be removed provided he was prepared, on behalf of the Mauritius Govern-

* Out of 400 souls 38 deaths are reported to have occurred on the voyage, and 26 while the vessel was in quarantine at the Mauritius.

ment, to pledge himself to adopt all the suggestions that had been made with regard to both the housing and rationing of the emigrants while at the depôt. He agreed to do so generally, but declined on the score of the expense that would have to be incurred to bind himself to provide accommodation at the depôt according to the scale laid down by Dr. Leith, viz. fifty-four superficial feet of floor for each inmate.

5. The Special Commissioner was then informed that this Government was not prepared to take any steps towards the removal of the restriction, and this decision has been upheld by Her Majesty's Principal Secretary of State.

6. The following statement shows the ships which have been despatched with emigrants from Bombay to Mauritius during the year under report:—

DATE.		NAMES OF SHIPS.	NUMBER OF EMIGRANTS.						REMARKS.
			ADULTS.		HALF ADULTS.		INFANTS.		
			Men.	Women.	Boys.	Girls.	Boys.	Girls.	
May ..	1	Ship "Regina" ..	195	70	23	16	5	..	
August .	29	"Caroline Coventry".....	309	50	4	6	1	4	
		Total....	504	120	27	22	6	4	

SIND.

7. Since the commencement of the Mitrow and Thur Canals a great number of people from the desert and neighbouring states have settled on the new lands now being brought under cultivation.

MILLS.

The annexed Statement contains a list of all the Spinning and Weaving Mills and Miscellaneous Steam Factories in the Bombay Presidency.

List *of* Spinning *and* Weaving Mills *and Miscellaneous* Steam Factories *in the* Bombay Presidency.

Town.	Names of Mill Owners or Company.	No. of Engines used.	Horse-power of each Engine.	No. of Spindles.	No. of Looms.	Average No. of hands employed daily.	Remarks.
Surat.....	The Jaffer Allee Spinning and Weaving Company, Limited.	2	30 each.	8,000	100	200	To work 24 Platts Macarthy's gins.
Do.....	Do. do. ..	1	8	....	....	....	
Do.....	Public Works Department.	1	15	....	....	....	To work 1 punching and drilling machine.
Randier.....	Mofussil Press and Ginning Company.	1	15	....	....	25	Works 23 Platts new double action Macarthy's gins.
Do.	Pestonjee Adurjee, Engineer.	1	6½	....	....	15	Works 10 Platts Macarthy's gins.
Amrolee.....	Bombay, Baroda, and Central India Railway Company.	1	30	....	....	50	2 planing machines, 3 shaping machines, 8 drilling machines, 2 screwing machines, 1 frame saw, 1 hand saw, 6 circular saws, 1 boring machine, 1 chamfering machine, 1 tennoning machine, 1 punching and shearing machine, 1 blowing fan.
Broach	Do. do.	1 steam crane.	10	....	....	....	
Do.	Do. do.	1	10	....	....	....	Works circular saw.
Do.	Broach Cotton Mills Company.	3	30	17,540	1	500	

Broach	Broach Cotton Mills Company.	2	15	....	....	65	Works 52 Platts new double action Macarthy's gins.
Do.	Victoria Cotton Gin and Press Company.	1	25	....	....	120	Works 80 Platts new double action Macarthy's gins.
Do.	Mofussil Press and Ginning Company.	2	15	....	....	120	Do. do. do.
Do.	Byramshaw Dhunjeebhoy.	1	20	....	....	Not working for some time past.	To work 30 old saw gins.
Do.	Premchund Roychund.	1	12	....	....	50	Works 30 Platts new double action Macarthy's gins.
Ahmedabad ..	Bombay, Baroda, and Central India Railway Company.	1	10	....	....	....	1 frame saw; 1 circular saw.
Broach	Do. do.	1 steam crane.	10	....	....	....	
Do.	Do. do.	1	10	....	....	....	1 circular saw.
Amrolee.....	Do. do.	1	30	....	....	....	2 wheel lathes, 7 slide rest lathes, 2 planing machines, 3 shaping machines, 8 drilling machines, 2 screwing machines, 1 frame saw, 1 hand saw, 6 circular saws, 1 boring machine, 1 chamfering machine, 1 tennoning machine, 1 punching and shearing machine, 1 blowing fan.
Duskrohie	Ahmedabad Spinning and Weaving Company.	2	20	10,000	100	300	

Town.	Names of Mill Owners or Company.	No. of Engines used.	Horse-power of each Engine.	No. of Spindles.	No. of Looms.	Average No. of hands employed daily.	Remarks.
Duskrohie ..	Mussil Press and Ginning Company.	1	15	62	....	....	This Company has not yet commenced work.
Do.	Cotton Pressing and Ginning Company.	1	15	28	....	....	This Company has stopped work for the present.
Do.	Ahmedabad Saw Machine Company.	1	10	....	....	....	The work has not yet been commenced.
Veerumgaum ..	Guzerat Cotton Cleaning Company, Limited	2	10	80 gins	....	10	
Dhundooka ..	Cotton Ginning Factory.	1	4	10 do.	....	14	
Wudwan and Dhundooka .	Wudwan Gin and Press Company, Limited.	1	18	....	....	125	
Coorla	Bomonjee Hormusjee Coorla Spinning and Weaving Company.	2	10 each.	27,000	460	1,000	
Callian	India Callian Rice-thrashing Company.	1	30	4	....	8, sometimes 40 to 60 are engaged as occasion may require.	
Kerool	Victoria Patent Brick Company.	1	30	....	....	30	
Rutnagherry ..	Rutnagherry Saw Mill Company, Limited.	1	25 6	....	....	About 300 men and boys.	
Carwar	Carwar Company, Limited.	2	25	....	....	125	
Do.	Do. do.	1	15	....	....		
Do	Do. do. ...	2 donkey.	6	....	....		
Do.....	Do. do.	1 engine.	45	....	....		

Bombay	Albert Mills Company, Limited.	3	2 of 30 each and 1 of 10	19,000	....	350	
Do.	Alliance Spinning Company.	2	30	20,000	....	400	
Do.	Bombay Spinning and Weaving Company.	2	60 and 40	25,000	....	525	
Do.	Bombay United Spinning and Weaving Company.	2	40	21,000	330	525 to 550	
Do.	Great Eastern Spinning and Weaving Company, Limited.	2	80	30.000	608	900	
Do.	Maneckjee Petit's Spinning and Weaving Company.	2 large and 1 small.	Not known.	60,000	900	1,500	
Do.	Oriental Spinning and Weaving Company.	2	60	32,571	326	778	
Do.	Royal Spinning and Weaving Company.	2	160	30,000	550	600	
Do.	Victoria Spinning and Weaving Company.	2	30	9,000	80	150	
Do.	Bombay Gas Company.	2	6	....	....	500	
Do.	Bombay Reclamation Company.	1	40	....	....	....	For driving steam-saws.
Do.	Do. do	2	25	....	....	500 to 600	Workshops.
Do.	Do. do	1	14	....	....		Do.
Do.	Do. do.....	1	10	....	....		
Do.	Fort Press Company ..	2 pairs.	80 nominal.	....	....	30	
Do.	Do. do.....	2 do.	80 do.	....	....	45	

Town.	Names of Mill Owners or Company.	No. of Engines used.	Horse-power of each Engine.	No. of Spindles.	No of Looms.	Average No of hands employed daily.	Remarks.
Bombay	Fort Press Comyany...	3 pairs.	40	....	....	30	This does not include contractors' men for lashing, &c.
Do.	Apollo Press Company, Limited.	2	30	....	....	80	Do. do.
Do.	Bombay Hydraulic Press Company.	2	30	....	....	40	Do. do.
Do.	Framjee Cowasjee Patent Press Company.	1	40	....	....	35	Do. do.
Do.	Scott Press Company...	2	35	....	....	32	
Do.	Akbar Cotton Press Company.	4	25	....	....	34	
Do.	Imperial Cotton Press Company.	4	25	....	....	25	
Do.	Colaba Press Company, Limited.	6	1 of 25 H.P. 2 of 20 ,, 1 of 12 ,, 1 of 10 ,, 1 of 5 ,,	....	....	200	
Do.	Ice Factory	....	....	....	....	....	
Sholapoor	East India Press Company.	1 pair.	40	....	....	25	
Barsee	Do. do.	1	40	....	....	25	
Julgaum	Do. do.	1	40	....	....	15	

MUNICIPAL.

BOMBAY.

During the first half of 1865 the Municipality was managed by a Board of three Commissioners under Act XIV. of 1856 and Act XXV. of 1858.

2. One of these Commissioners was appointed by Government, and was President of the Board, and the remaining two were selected by the Bench of Justices.

3. Act XXV. of 1858 provided for raising a fund for Municipal purposes, which fund, with certain trifling restrictions, was entirely under the control of the Board.

4. The necessity for a reform in the Municipality had long been felt by the Government and Her Majesty's Justices of the Peace for Bombay.

5. Towards the end of 1863 Dr. Leith was commissioned by Government to report on the sanitary condition of the city, and his report of the 29th February 1864 placed in a most striking and unquestionable light the urgent want of more effective measures for improving the sanitary condition of Bombay.

6. Government on the 2nd May 1864 passed a Resolution on Dr. Leith's report in which it sketched a comprehensive scheme for municipal reform. The opinion of the Bench of Justices was invited, and after much discussion the question was earnestly taken up by the Honourable Walter Cassels, then a member of the Legislative Council, who prepared and introduced into Council a Draft Act embodying the views of Government, while it endeavoured to deal with almost every question of municipal administration.

7. The Report of the Select Committee was made on the 12th January 1865. The Bill was discussed in Council section by section, and sent up for the sanction of His Excellency the Viceroy, who recorded his sanction on the 10th May 1865.

8. The new Act II. of 1865 took effect from the 1st July 1865. Its main features were as follows:—

The Justices of the Peace for the Town and Island of Bombay were created a Body Corporate, with perpetual succession, and a common seal, and the power to hold lands.

The Corporation were further empowered to impose taxes and rates, and to borrow money on the security of the same.

The entire executive power and responsibility for the purposes of the Act was vested in one Commissioner appointed by Government for a term of three years.

He is to lay before the Justices each year a Budget of the income and expenditure of the Municipality for the following year, which the Justices have the power to revise at a Special General Meeting.

A Controller of Municipal Accounts was also appointed by the Government for a like term, generally to supervise the receipts and disbursements of the Municipal Fund. A Health Officer and an Executive Engineer were likewise appointed by Government to be subordinate to the Commissioner.

The Police, for the purposes of this Act, were further placed under the control of the Commissioner.

9. Thus the Bench of Justices, having formerly but a small and that only nominal voice in municipal matters, have become a Corporation with almost supreme control over the affairs of their city; and one Commissioner, with entire executive power and responsibility, has taken the place of a Board of three Commissioners with equal power but divided responsibility.

10. The number of assessable houses and properties is, as ascertained by the Superintendents in their recent survey, as under :—

No.	Names of Wards.	Population.	Area in Acres.	No. of Houses and assessable Properties.
1	Colaba	19,161	238·36	518
2	Fort	49,582	698·66	1,221
3	Mandwee	157,996	210·96	3,239
4	Oomburkhadee	123,279	153·55	2,062
5	Bhooleshwur	144,606	235·90	3,441
6	Cammatteepoora	128,214	747·78	2,573
7	Girgaum	56,866	301·90	1,938
8	Malabar Hill.....	19,238	1,104·33	546
9	Mazagon	31,246	530·64	866
10	Parell and Mahim.....	53,792	7,696·69	5,249
	Total....	783,980	11,918·77	21,653

Revenue of the Municipality.

11. The amount actually recovered on account of the Municipality under all headings was Rs. 22,78,247-7.

12. The receipts during the year may thus be classified :—

	Rs.	a.	p.
House rate, at 5 per cent.	10,57,378	8	0
Water rate	1,78,718	8	0
Wheel and Horse tax	2,24,011	12	0
Town duties	5,04,788	8	0
Liquor licences	76,772	13	8
Fines	52,406	8	9
Fees.....	34,040	2	10
Market stalls and Slaughter fees	22,595	0	6
Miscellaneous Receipts (Municipal Fund)	35,971	4	7
Do. do. (Water Works do.)	3,428	9	1
Do. do. (Drainage do.)	88,133	11	7
Total....Rs.	22,78,247	7	0

Vehar Water.

13. The water supply was commenced in 1860, and the following statement gives the total assessment each year :—

Years.	Amount of ordinary Assessment on House valuation.			Amount of Meter Assessment.			Amount of Mill Assessment.			TOTAL.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1861 and prior.	27,102	15	8	7,271	4	6	11,245	9	10	45,619	14	0
1862	50,360	15	0	4,469	3	1	8,981	13	0	63,811	15	1
1863	86,406	0	0	6,785	1	0	16,334	13	0	1,09,525	14	0
1864	2,39,070	7	0	7,349	13	0	35,181	12	0	2,80,602	0	0
1865	3,00,288	3	0	37,956	4	0	33,685	13	0	3,71,930	4	0

14. The great increase in the amount of ordinary assessment according to house valuation is readily understood when one notes the enormous increase in house rates in 1864 and 1865, and the extension of water supply in the town each year, as shown by the following figures :—

The number of house connections on 31st Dec. 1860 was 208
Do. do. 31st December 1861 was 1,061
Do. do. 31st December 1862 was 2,085
Do. do. 31st December 1863 was 3,422
Do. do. 31st December 1864 was 5,198
Do. do. 31st December 1865 was 6,470

15. The large increase on meter assessments in 1865 is due to the fact that a large number of new meters arrived, and that 253 were fixed towards the end of the year.

The Public Health.

16. The year 1865 was very unhealthy throughout India. Cholera prevailed everywhere.

17. In Bombay the death rate was far higher than it has ever yet been. The death rate in 1863 was 2·28 per cent., in 1864 3·06 per cent., in 1865 it rose to 3·5 per cent. Though cholera and small-pox had many victims, the chief mortality was from fever, the death rate from which alone was higher in Bombay than the death rate in England from all causes.

Lighting the Streets.

18. Gas was first lighted on 7th October 1865. On that night 133 lamps were lighted. The late Board not having ordered lamps, the lighting of the city has been delayed for nearly one year. There were 220 lamps on the 31st December.

Fire-Engines.

19. In accordance with the suggestions of the Fire-Engine Committee (President, Mr. A. Grant) three Steam Fire-Engines were ordered out. The Honourable Mr. Rustomjee Jamsetjee, with his usual liberality, presented the Municipality with another of the largest size.

ECCLESIASTICAL.

EXTRACTS FROM A REPORT BY THE LORD BISHOP OF BOMBAY, DATED 30TH APRIL 1866.

CLERGY.

Total licensed at this time—fifty-five.

2. I am happy to state that the complement of Chaplains and of Junior Chaplains is at present full, there being now on the list eleven of the former and nineteen of the latter. Four, however, are absent on furlough or on sick leave; the number therefore upon duty is twenty-six. This is rather a larger proportion than I have generally been able to record as on actual service, and consequently there is no one of the recognised stations which is not the residence of a Chaplain, with the exception of Sholapoor, and this appointment will, I hope, in a few weeks be occupied. At the same time I think it right to observe that owing to the great increase of Europeans in Bombay and in Poona I cannot regard either of those places as duly served without another Chaplain.

3. In addition to the Clergy on the Ecclesiastical Establishment there are also four provided from other sources for the benefit of Europeans—the Master of the Byculla Schools, the Minister of Kotree, the Curate of Saint Peter's, Mazagon, and the Chaplain of the Harbour. Three of these have arrived during the past year. And I may add as a fact of much interest in its bearing on our means of ministering to Europeans, that of twenty Missionary Clergymen holding licences in this diocese, sixteen officiate more or less frequently to English congregations.

4. The arrangement which I had the honour to propose in August last on the arrival of the Reverend W. Jones, and by which the Upper Sind stations were to receive more pastoral attention than had before been practicable, has been productive of much benefit. The Reverend H. W. Bagnell, the Senior Chaplain at Kurrachee, undertook the tour in Upper Sind, spending the cold season there; his presence in the stations has been much prized.

CHURCHES.

5. I am glad to report the consecration of Trinity Church, Poorundhur, and of Saint Paul's Church, Matheran. Both of these Churches will be indebted to gentlemen of the mercantile body for stained glass eastern windows. The Chapel at Ghorpoorie in Poona, which has been considerably enlarged for the accommodation of the Regiment there, will soon be open. The Mission Church at Kurrachee which I mentioned last year, and for the grant-in-aid of which from Government I may express the thanks of many, is already in use. The Spire of the Memorial Church of Saint John at Colaba has been completed, and for the first time that structure may be said to present a finished appearance, although the substitution of a proper vestry-room instead of the strange appendage in rear of the Chancel, never intended for the purpose, will be requisite to make the building a consistent ecclesiastical edifice. Of the somewhat slow but substantial work of renovation in Saint Thomas' Cathedral your Excellency has received separate statements from the Trustees. The new Church of Saint Paul at Poona is also a substantial building, but the work appears to me to give slender promise of completion this year. The Church ordered for Neemuch still waits for its commencement. The temporary bungalow at Nusseerabad, for which Rs 3,000 were sanctioned, cannot, it is stated, be built for the money, and I should be glad if the proposal to fit up for the present a vacant barrack as a Chapel

be adopted. Belgaum Camp Church is at length, I trust, advancing. For that at Aden designs are now with me which I hope may be approved. The stop altogether put to the new Church at Kirkee no doubt was wise; a larger building and of improved design for ventilation will be required. For a Military congregation I believe no principle is better than that of Kurrachee Church, in which all the apertures are doors opening into verandas; and of the kind of the veranda, approaching to a cloister, which might be with good effect employed, the west side of the Sassoon Hospital at Poona seems to me to afford an example.

EDUCATION.

14. It seems proper that this report should contain some notice of the formation of a Diocesan Board of Education. The call for middle class schools, mainly in the island of Bombay, has lately become urgent; and it was natural for those who saw the need to look in the first instance to the Bombay Education Society for aid. The original design from which this Society sprung was "a school in Bombay for the children of Protestant Christians, or of such others as might be disposed to avail themselves of its benefits." The plan was afterwards enlarged, and "it was determined to establish and maintain one school at the least within the island of Bombay, and also to establish and assist other schools within the limits of the Government, as far as the Society's funds might admit." Had this plan been adhered to there would have been nothing to prevent the Society from being, as its designation imported, an organisation for the promotion of European Christian education generally throughout the Presidency. But when application was made to the Managing Committee for assistance in establishing a middle class school, it was pointed out that by the existing regulations the Society is limited to a care for the children of the poor, a description which would hardly apply, it was thought, to the

pupils in such a school as was now contemplated. Either therefore the regulations of the Society must be altered or a new machinery set up. There was also another consideration. In the Schools of the Bombay Education Society it is required that the children should all be instructed in the principles of the Church of England. But occasionally instances will occur in which children, who ought to benefit by a middle class school, will be of other communions than the Church of England, and the parents would object to their learning the catechism and other formularies of the Church. It is not indeed to be denied that the Church in her 79th Canon does require that in all schools conducted on her principles the master shall teach in English or Latin the larger or shorter catechism set forth by public authority; but at the date of that Canon there would be few if any to object to this; now it is otherwise. The Diocesan Board of Education therefore has considered that if schools are conducted strictly on the principles of the Church, so far as Church of England children are concerned, and only in the case of objectors the learning of Church formularies be not enforced, the claims of the Church on the one hand, and a due regard to the consciences of non-conformists on the other, will be equitably adjusted. Local Committees are now at work in connection with the Board in order to promote the opening of schools in different districts of the island of Bombay; and as soon as their plans are matured it will depend upon the parents' cöoperation and that of the community at large to give to those plans the requisite support.

COTTON FRAUDS DEPARTMENT.

Act IX. of 1863, entitled "an Act for the prevention of the adulteration of Cotton, and the better suppression of Frauds in the Cotton Trade of the Presidency of Bombay," continues to produce beneficial effects.

2. In his report for 1865 the Acting Inspector in Chief states, "the department has continued to act with caution and discretion in carrying out the provisions of Act IX. of 1863, endeavouring to enlist the sympathies of the people in its favour, rather than irritate them by showing an uncompromising determination to enforce the law to the very letter. The results of this policy are admitted by gentlemen of the greatest experience in the cotton trade, by the managers of the large ginning factories, and by the Inspectors in this department on duty at the presses in Bombay to be most satisfactory. There can be no doubt as to the benefits conferred on the cotton trade of this Presidency by Act IX. Seldom or never have we cases of cotton wilfully deteriorated by the admixture of foreign matter. The staple reaches Bombay, as I am informed by persons constantly at the presses, in a state of comparatively great cleanliness, and in condition very superior to that of former years."

3. Notwithstanding, Colonel Walker a little further on is constrained to acknowledge "however much has been effected by this department in carrying out the provisions of the Act, very much remains to be done. The greatest watchfulness is required. Any relaxation in inspecting would in a short time, I believe, reduce cotton to a worse state than it was in when the necessity for amending the law was clearly proved in 1863."

* * * *

4. The number of bales of cotton exported in the year under report from the Presidency (*i.e.* from the ports of Bombay, Kurrachee, and Canara) is 1,139,006. The fees levied on the above amount to Rupees 2,71,487-2-6. Press licence fees, fines, and sale proceeds of cotton confiscated under Act IX of 1863 amount to Rupees 3,708-2-9. After deducting all charges for establishments, &c., Rupees 1,95,118-8-4, there is left as balance for the year Rs. 80,076-12-11. Adding to this the surplus on 1st January 1865, Rs. 1,13,040-3-4, there is a total surplus on 1st January 1866 of Rs. 1,93,117-0-3.

Bales exported fees	2,71,487	2	6
Licence fees, fines, and sale of adulterated cotton	3,708	2	9
Total....	2,75,195	5	3
Expenditure	1,95,118	8	4
Balance	80,076	12	11
Balance 1st Jan. 1865.	1,13,040	3	4
Total 1st January 1866.	1,93,117	0	3
Estimated Receipts for 1866.....	85,000	0	0
Estimated Total for 1866.	2,78,117	3	3

5. The above statement shows that notwithstanding the reduction of the fee from 4 to 3 annas on each bale of cotton exported, a more than sufficient sum for the purposes of the department was realised during the year.

6. The convictions under the Act number 35. The whole of these, with the exception of six, were obtained in the Surat and Broach collectorates. The number of convictions cannot, however, be accepted as a criterion of the usefulness of the Act as only the most flagran cases were prosecuted, the great majority of owners having voluntarily consented to remove their cotton in order to have it cleaned when found to be dirty. The question of rendering penal the admixture of good and bad qualities of the same variety of cotton is now under consideration.

7. The officers of the department have, in addition to their special duty of preventing fraud, paid much attention to

the introduction of an improved description of cotton into their respective districts, and of a better style of cultivation. In Khandeish Mr. Hewett, acting under the orders of Mr. Ashburner, the Collector, has effected an almost entire revolution in the cotton cultivation of that extensive province by extirpating the indigenous seed and substituting that from Berar. The strictest instructions have been issued to the officers of the department to abstain from any interference with the free action of the ryot, and invariably in all matters affecting the improvement of the staple to act under the orders of the Collector. The question of an alteration in the law so as to make the surplus cotton frauds funds available for the introduction of a better description of seed and of improved machinery is now under consideration.

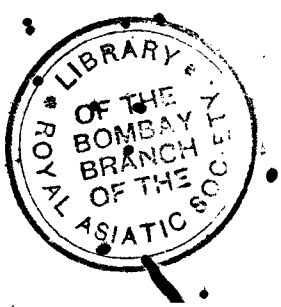
SIND.

8. Two licensed presses have been at work during the year—one a steam press throughout the year, and the other a hand press for a short time only. Since the 1st March last the number of presses has been doubled. Nine cases only have been investigated by the Inspector under the Act, the majority being for infraction of Section VIII. None were made the subject of magisterial inquiry as in each instance the Inspector's requisition met with compliance.

9. The following table shows the number of bales pressed under the Act, and the receipts and disbursements on that account:—

No of Bales pressed for export to Foreign Ports.	Receipts.			Disbursements.		
	Rs.	a.	p.	Rs.	a.	p.
32,073	6,777	4	0	9,471	10	10

10. Compared with last year the receipts show a decrease of Rs. 3,743-12-0 and the disbursements a decrease of Rs. 85-5-2. This decrease is attributable to a reduction of the fee in April 1865 from 4 to 3 annas per bale, and to the great depression in the cotton trade during the year.



POPULATION.

SIND.

No statistics have been compiled on this subject since 1861. The population of Sind, including the territory of His Highness Meer Ali Moorad, was computed in that year at 1,945,594, of which the following is an abstract. The area of the several charges in Sind is also shown in square miles :—

	Area.	Population.
Kurrachee	19,240	340,000
Hydrabad	10,974	630,300
Shikarpoor	9,042	650,304
Frontier Upper Sind	2,147	47,955
Thur and Parkur	13,000	127,035
	54,403	1,795,594
Territory of His Highness Meer Ali Moorad	6,497	150,000
Grand Total	60,900	1,945,594

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AGRICULTURE.

SIND.

The subjoined table exhibits the amount of land cultivated during 1865-66 contrasted with 1864-65 :—

	1864-65.	1865-66.
Kurrachee	324,427	310,000
Hydrabad	430,008	559,403
Shikarpoor	684,546	685,000
Frontier	121,382	122,000
Thur and Parkur ..	172,441	195,057
Total....	1,732,804	1,871,460

2. The decrease in the Kurrachee Collectorate is owing to lands having been relinquished under the new settlement in the Schwan Talooka.

3. There is, however, an increase to the extent of acres 129,395 in the Hydrabad Collectorate, which may be attributed to the large quantity of rain that fell in the early part of the year, and to the late period up to which water remained in the canals.

4. In the Thur and Parkur district the increase in cultivation is 22,616 acres, and is mainly due to the extension of the Mitrow Canal, which important work is now nearly completed. In the Frontier District of Upper Sind experiments are in progress for cultivating the Peruvian and Egyptian cotton seed. About 2,700 lbs. have been distributed among the Zemindars, for whose use 8 roller cotton gins have been sent for from England. It is hoped that in succeeding years there will be a considerable area of land sown with indigenous and exotic cotton seed.